

# **44 CFR: Emergency Management and Assistance**

**Revised May 31, 2007**

**Includes Changes from the 1 October 2006 Revision of 44 CFR**

## **Excerpts for Floodplain Management Purposes Annotated**

This document contains selected Sections from 44 CFR that address the requirements for establishing and enforcing a local flood damage prevention program – its program development requirements, maintenance, and enforcement. It is primarily intended to assist local floodplain administrators and elected officials in the conduct and enforcement of their community's flood damage prevention program. In this light, the document does not address the insurance aspects of the National Flood Insurance Program (NFIP). The document is annotated with remarks that are intended to help the reader more fully understand the intended meaning of the referenced citation. The remarks are for guidance and clarification only and do not necessarily reflect official interpretations of regulatory requirements. For more specific guidance, please contact your local FEMA Regional Mitigation Division Office.

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The following Sections and their corresponding subjects are referenced below, but the narratives are not included in this document so that it may remain as brief as possible. Please refer to a more complete copy of 44 CFR:

Part 66	Consultation With Local Officials
Part 67	Appeals From Proposed Flood Elevation Determinations
Part 68	Administrative Hearing Procedures
Part 71	Implementation of Coastal Barrier Legislation
Part 72	Procedures and Fees for Processing Map Changes
Part 75	Exemption of State-Owned Properties Under Self-Insurance Plan
Part 78	Flood Mitigation Assistance

Note: You may view the entire 44 CFR (and all other CFRs) at the website for the National Archives and Records Administration (NARA). Go to [www.nara.gov](http://www.nara.gov)

This document will always be a work in progress. It must be updated at least once a year, normally after the October revisions are available. Any productive comments you might have are genuinely welcome. Please contact Dale Hoff, FEMA Region VI at (940) 898-5225 or by email at [dale.hoff@dhs.gov](mailto:dale.hoff@dhs.gov)

## DEFINITIONS

## 59.1

<p>[Code of Federal Regulations]          [Title 44, Volume 1]          [Revised as of October 1, 2006]          From the U.S. Government Printing Office via GPO Access</p> <p>TITLE 44--EMERGENCY MANAGEMENT AND ASSISTANCE</p> <p>CHAPTER I--FEDERAL EMERGENCY MANAGEMENT AGENCY, DEPARTMENT OF HOMELAND SECURITY</p> <p>PART 59--GENERAL PROVISIONS--Table of Contents</p> <p>Subpart A--General</p> <p>Sec. 59.1 Definitions.</p> <p>As used in this subchapter--</p> <p><b>Act</b> means the statutes authorizing the National Flood Insurance Program that are incorporated in 42 U.S.C. 4001-4128.</p> <p><b>Actuarial rates</b>--see risk premium rates.</p> <p><b>Administrator</b> means the Federal Insurance Administrator.</p> <p><b>Agency</b> means the Federal Emergency Management Agency, Washington DC.</p> <p><b>Alluvial fan flooding</b> means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport, and deposition; and, unpredictable flow paths.</p> <p><b>Apex</b> means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.</p> <p><b>Applicant</b> means a community which indicates a desire to participate in the Program.</p> <p><b>Appurtenant structure</b> means a structure that is on the same parcel of property as the principal structure to be insured and the use of which is incidental to the use of the principal structure.</p> <p><b>Area of future-conditions flood hazard</b> means the land area that would be inundated by the 1-percent-annual-chance (100-year) flood based on future-conditions hydrology.</p>	<p>COMMENTS</p> <p>REGULATORY DEFINITIONS</p> <p>Compare "Administrator" with "Director"</p> <p>An <i>appurtenant</i> structure is also referred to as an <i>accessory</i> structure</p>
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**Area of shallow flooding** means a designated AO, AH, AR/AO, AR/AH, or VO zone on a community's Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

**Area of special flood-related erosion hazard** is the land within a community that is most likely to be subject to severe flood-related erosion losses. The area may be designated as Zone E on the Flood Hazard Boundary Map (FHBM). After the detailed evaluation of the special flood-related erosion hazard area in preparation for publication of the FIRM, Zone E may be further refined.

**Area of special flood hazard** is the land in the flood plain within a community subject to a 1 percent or greater chance of flooding in any given year. The area may be designated as Zone A on the FHBM. After detailed ratemaking has been completed in preparation for publication of the flood insurance rate map, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, or V1-30, VE, or V. For purposes of these regulations, the term "special flood hazard area" is synonymous in meaning with the phrase "area of special flood hazard".

**Area of special mudslide (i.e., mudflow) hazard** is the land within a community most likely to be subject to severe mudslides (i.e., mudflows). The area may be designated as Zone M on the FHBM. After the detailed evaluation of the special mudslide (i.e., mudflow) hazard area in preparation for publication of the FIRM, Zone M may be further refined.

**Base flood** means the flood having a one percent chance of being equaled or exceeded in any given year.

**"Basement"** means any area of the building having its floor subgrade (below ground level) on all sides.

**Breakaway wall** means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

**Building**--see structure.

**Chargeable rates** mean the rates established by the Administrator pursuant to section 1308 of the Act for first layer limits of flood insurance on existing structures.

**Chief Executive Officer** of the community (CEO) means the official of the community who is charged with the authority to implement and administer laws, ordinances and regulations for that community. action from storms or seismic sources.

The following terms are synonymous:

- Area of Special Flood Hazard
- Special Flood Hazard Area (SFHA)
- Base Flood Area
- Regulatory Floodplain

"Basement":

- Reference: TB-9
- Subgrade on ALL sides
- A sunken living room, even if shallow in depth, is a basement if all sides are below grade.
- If a structure is constructed into the side of a hill where 3 sides are subgrade but the 4<sup>th</sup> side is at grade (usually where the entry is located), it is NOT a basement.

<p><b>Coastal high hazard area</b> means an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources.</p> <p><b>Community</b> means any State or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has authority to adopt and enforce flood plain management regulations for the areas within its jurisdiction.</p> <p><b>Contents coverage</b> is the insurance on personal property within an enclosed structure, including the cost of debris removal, and the reasonable cost of removal of contents to minimize damage. Personal property may be household goods usual or incidental to residential occupancy, or merchandise, furniture, fixtures, machinery, equipment and supplies usual to other than residential occupancies.</p> <p><b>Criteria</b> means the comprehensive criteria for land management and use for flood-prone areas developed under 42 U.S.C. 4102 for the purposes set forth in part 60 of this subchapter.</p> <p><b>Critical feature</b> means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.</p> <p><b>Curvilinear Line</b> means the border on either a FHBM or FIRM that delineates the special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazard areas and consists of a curved or contour line that follows the topography.</p> <p><b>Deductible</b> means the fixed amount or percentage of any loss covered by insurance that is borne by the insured prior to the insurer's liability.</p> <p><b>Developed area</b> means an area of a community that is:</p> <p>(a) A primarily urbanized, built-up area that is a minimum of 20 contiguous acres, has basic urban infrastructure, including roads, utilities, communications, and public facilities, to sustain industrial, residential, and commercial activities, and</p> <p>(1) Within which 75 percent or more of the parcels, tracts, or lots contain commercial, industrial, or residential structures or uses; or</p> <p>(2) Is a single parcel, tract, or lot in which 75 percent of the area contains existing commercial or industrial structures or uses; or</p> <p>(3) Is a subdivision developed at a density of at least two residential structures per acre within which 75 percent or more of the lots contain existing residential structures at the time the designation is adopted.</p> <p>(b) Undeveloped parcels, tracts, or lots, the combination of which is less than 20 acres and contiguous on at least 3 sides to areas meeting the criteria of paragraph (a) at the time the designation is adopted.</p>	<p>V Zone only</p> <p>“Community”:</p> <ul style="list-style-type: none"> <li>• State</li> <li>• Political subdivision of the state</li> <li>• Indian tribe</li> <li>• Any legally defined entity that has land-use authority</li> </ul>
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(c) A subdivision that is a minimum of 20 contiguous acres that has obtained all necessary government approvals, provided that the actual ``start of construction" of structures has occurred on at least 10 percent of the lots or remaining lots of a subdivision or 10 percent of the maximum building coverage or remaining building coverage allowed for a single lot subdivision at the time the designation is adopted and construction of structures is underway. Residential subdivisions must meet the density criteria in paragraph (a)(3).

**Development** means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

**Director** means the Director of the Federal Emergency Management Agency.

**Eligible community or participating community** means a community for which the Administrator has authorized the sale of flood insurance under the National Flood Insurance Program.

**Elevated building** means, for insurance purposes, a nonbasement building which has its lowest elevated floor raised above ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

**Emergency Flood Insurance Program or emergency program** means the Program as implemented on an emergency basis in accordance with section 1336 of the Act. It is intended as a program to provide a first layer amount of insurance on all insurable structures before the effective date of the initial FIRM.

**Erosion** means the process of the gradual wearing away of land masses. This peril is not per se covered under the Program.

**Exception** means a waiver from the provisions of part 60 of this subchapter directed to a community which relieves it from the requirements of a rule, regulation, order or other determination made or issued pursuant to the Act.

**Existing construction**, means for the purposes of determining rates, structures for which the ``start of construction" commenced before the effective date of the FIRM or before January 1, 1975, for FIRMs effective before that date. ``Existing construction" may also be referred to as ``existing structures."

**Existing manufactured home park or subdivision** means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

**Existing structures** see existing construction.

For "Director":  
Compare "Director" with "Administrator"

"Development":

- Anything an individual does to real estate. There are a few agricultural exceptions.
- "...storage of equipment or materials" inserted in 1986 to cover auto salvage yards

For "Elevated Buildings":  
Reference: TB-5 for coastal areas

Compare "Exception" with "Variance"

**Expansion to an existing manufactured home park or subdivision** means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

**Federal agency** means any department, agency, corporation, or other entity or instrumentality of the executive branch of the Federal Government, and includes the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation.

**Federal instrumentality responsible for the supervision, approval, regulation, or insuring of banks, savings and loan associations, or similar institutions** means the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Comptroller of the Currency, the Federal Home Loan Bank Board, the Federal Savings and Loan Insurance Corporation, and the National Credit Union Administration.

**Financial assistance** means any form of loan, grant, guaranty, insurance, payment, rebate, subsidy, disaster assistance loan or grant, or any other form of direct or indirect Federal assistance, other than general or special revenue sharing or formula grants made to States.

**Financial assistance for acquisition or construction purposes** means any form of financial assistance which is intended in whole or in part for the acquisition, construction, reconstruction, repair, or improvement of any publicly or privately owned building or mobile home, and for any machinery, equipment, fixtures, and furnishings contained or to be contained therein, and shall include the purchase or subsidization of mortgages or mortgage loans but shall exclude assistance pursuant to the Disaster Relief Act of 1974 other than assistance under such Act in connection with a flood. It includes only financial assistance insurable under the Standard Flood Insurance Policy.

**First-layer coverage** is the maximum amount of structural and contents insurance coverage available under the Emergency Program.

**Flood or Flooding** means:

(a) A general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters.
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

(3) Mudslides (i.e., mudflows) which are proximately caused by flooding as defined in paragraph (a)(2) of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

Flooding:

- Can be water from ANY source
- Temporary inundation

(b) The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph (a)(1) of this definition.

**Flood elevation determination** means a determination by the Administrator of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year.

**Flood elevation study** means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

**Flood Hazard Boundary Map (FHBM)** means an official map of a community, issued by the Administrator, where the boundaries of the flood, mudslide (i.e., mudflow) related erosion areas having special hazards have been designated as Zones A, M, and/or E.

**Flood insurance** means the insurance coverage provided under the Program.

**Flood Insurance Rate Map (FIRM)** means an official map of a community, on which the Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community.

**Flood Insurance Study** see flood elevation study.

**Flood plain or flood-prone area** means any land area susceptible to being inundated by water from any source (see definition of "flooding").

**Flood plain management** means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and flood plain management regulations.

**Flood plain management regulations** means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a flood plain ordinance, grading ordinance and erosion control ordinance) and other applications of police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

**Flood protection system** means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

See Endnote #1



**Flood proofing** means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

**Flood-related erosion** means the collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

**Flood-related erosion area or flood-related erosion prone area** means a land area adjoining the shore of a lake or other body of water, which due to the composition of the shoreline or bank and high water levels or wind-driven currents, is likely to suffer flood-related erosion damage.

**Flood-related erosion area management** means the operation of an overall program of corrective and preventive measures for reducing flood-related erosion damage, including but not limited to emergency preparedness plans, flood-related erosion control works, and flood plain management regulations.

**Floodway**-- see regulatory floodway.

**Floodway encroachment lines** mean the lines marking the limits of floodways on Federal, State and local flood plain maps.

**Freeboard** means a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

**Functionally dependent use** means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

**Future-conditions flood hazard area**, or future-conditions floodplain--see Area of future-conditions flood hazard.

**Future-conditions hydrology** means the flood discharges associated with projected land-use conditions based on a community's zoning maps and/or comprehensive land-use plans and without consideration of projected future construction of flood detention structures or projected future hydraulic modifications within a stream or other waterway, such as bridge and culvert construction, fill, and excavation.

**General Counsel** means the General Counsel of the Federal Emergency Management Agency.

Reference: TBs 3 and 7  
as appropriate

**Highest adjacent grade** means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

**Historic Structure** means any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
- (d) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
  - (1) By an approved state program as determined by the Secretary of the Interior or
  - (2) Directly by the Secretary of the Interior in states without approved programs.

**Independent scientific body** means a non-Federal technical or scientific organization involved in the study of land use planning, flood plain management, hydrology, geology, geography, or any other related field of study concerned with flooding.

**Insurance adjustment organization** means any organization or person engaged in the business of adjusting loss claims arising under the Standard Flood Insurance Policy.

**Insurance company or insurer** means any person or organization authorized to engage in the insurance business under the laws of any State.

**Levee** means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

**Levee System** means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

**Lowest Floor** means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; Provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Sec. 60.3.

Definition of "enclosure"

Reference: TBs 1, 2, 5, and 7 for helpful information involving enclosures

***Mangrove stand*** means an assemblage of mangrove trees which are mostly low trees noted for a copious development of interlacing adventitious roots above the ground and which contain one or more of the following species: Black mangrove (*Avicennia Nitida*); red mangrove (*Rhizophora Mangle*); white mangrove (*Languncularia Racemosa*); and buttonwood (*Conocarpus Erecta*).

***Manufactured home*** means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

***Manufactured home park or subdivision*** means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

***Map*** means the Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM) for a community issued by the Agency.

***Mean sea level*** means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

***Mudslide(i.e., mudflow)*** describes a condition where there is a river, flow or inundation of liquid mud down a hillside usually as a result of a dual condition of loss of brush cover, and the subsequent accumulation of water on the ground preceded by a period of unusually heavy or sustained rain. A mudslide (i.e., mudflow) may occur as a distinct phenomenon while a landslide is in progress, and will be recognized as such by the Administrator only if the mudflow, and not the landslide, is the proximate cause of damage that occurs.

***Mudslide (i.e., mudflow) area management*** means the operation of an overall program of corrective and preventive measures for reducing mudslide (i.e., mudflow) damage, including but not limited to emergency preparedness plans, mudslide control works, and flood plain management regulations.

***Mudslide (i.e., mudflow) prone area*** means an area with land surfaces and slopes of unconsolidated material where the history, geology and climate indicate a potential for mudflow.

***New construction*** means, for the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, new construction means structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

Insurance definition of "new construction"

Floodplain management definition of "new construction"

**New manufactured home park or subdivision** means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

**100-year flood** see base flood.

**Participating community**, also known as an eligible community, means a community in which the Administrator has authorized the sale of flood insurance.

**Person** includes any individual or group of individuals, corporation, partnership, association, or any other entity, including State and local governments and agencies.

**Policy** means the Standard Flood Insurance Policy.

**Premium** means the total premium payable by the insured for the coverage or coverages provided under the policy. The calculation of the premium may be based upon either chargeable rates or risk premium rates, or a combination of both.

**Primary frontal dune** means a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

**Principally above ground** means that at least 51 percent of the actual cash value of the structure, less land value, is above ground.

**Program** means the National Flood Insurance Program authorized by 42 U.S.C. 4001 through 4128.

**Program deficiency** means a defect in a community's flood plain management regulations or administrative procedures that impairs effective implementation of those flood plain management regulations or of the standards in Sec. 60.3, 60.4, 60.5, or 60.6.

**Project cost** means the total financial cost of a flood protection system (including design, land acquisition, construction, fees, overhead, and profits), unless the Federal Insurance Administrator determines a given "cost" not to be a part of such project cost.

**Recreational vehicle** means a vehicle which is:

- (a) Built on a single chassis;
- (b) 400 square feet or less when measured at the largest horizontal projection;
- (c) Designed to be self-propelled or permanently towable by a light duty truck; and
- (d) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Recreational Vehicle:

- Single chassis
- 400 sq ft or less
- Self-propelled or towable
- Temporary, recreational use only

**Reference feature** is the receding edge of a bluff or eroding frontal dune, or if such a feature is not present, the normal high-water line or the seaward line of permanent vegetation if a high-water line cannot be identified.

**Regular Program** means the Program authorized by the Act under which risk premium rates are required for the first half of available coverage (also known as "first layer" coverage) for all new construction and substantial improvements started on or after the effective date of the FIRM, or after December 31, 1974, for FIRM's effective on or before that date. All buildings, the construction of which started before the effective date of the FIRM, or before January 1, 1975, for FIRMs effective before that date, are eligible for first layer coverage at either subsidized rates or risk premium rates, whichever are lower. Regardless of date of construction, risk premium rates are always required for the second layer coverage and such coverage is offered only after the Administrator has completed a risk study for the community.

**Regulatory floodway** means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

**Remedy a violation** means to bring the structure or other development into compliance with State or local flood plain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

**Risk premium rates** mean those rates established by the Administrator pursuant to individual community studies and investigations which are undertaken to provide flood insurance in accordance with section 1307 of the Act and the accepted actuarial principles. "Risk premium rates" include provisions for operating costs and allowances.

**Riverine** means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

**Sand dunes** mean naturally occurring accumulations of sand in ridges or mounds landward of the beach.

**Scientifically incorrect.** The methodology (ies) and/or assumptions which have been utilized are inappropriate for the physical processes being evaluated or are otherwise erroneous.

**Second layer coverage** means an additional limit of coverage equal to the amounts made available under the Emergency Program, and made available under the Regular Program.

**Servicing company** means a corporation, partnership, association, or any other organized entity which contracts with the Federal Insurance Administration to service insurance policies under the National Flood Insurance Program for a particular area.

**Regulatory Floodway:**

- Political boundary
- Must be formally adopted
- Normally identified by modeling up to 1 foot of rise. May be less than 1 foot but not more. The smaller the factor used in defining the floodway, the larger it becomes, thus making the overall SFHA increasingly restrictive.

**Sheet flow area**-- see area of shallow flooding.

**60-year setback** means a distance equal to 60 times the average annual long term recession rate at a site, measured from the reference feature.

**Special flood hazard area**-- see "area of special flood hazard".

Special hazard area means an area having special flood, mudslide (i.e., mudflow), or flood-related erosion hazards, and shown on an FHBM or FIRM as Zone A, AO, A1-30, AE, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, A99, AH, VO, V1-30, VE, V, M, or E.

**Standard Flood Insurance Policy** means the flood insurance policy issued by the Federal Insurance Administrator, or an insurer pursuant to an arrangement with the Administrator pursuant to Federal statutes and regulations.

**Start of Construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (Pub. L. 97-348))**, includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

**State** means any State, the District of Columbia, the territories and possessions of the United States, the Commonwealth of Puerto Rico, and the Trust Territory of the Pacific Islands.

**State coordinating agency** means the agency of the state government, or other office designated by the Governor of the state or by state statute at the request of the Administrator to assist in the implementation of the National Flood Insurance Program in that state.

**Storm cellar** means a space below grade used to accommodate occupants of the structure and emergency supplies as a means of temporary shelter against severe tornado or similar wind storm activity.

SFHA Is synonymous with:

- 100-year flood
- Base flood
- 1 per cent flood
- The "floodplain" (see Endnote #1)

- "Start of Construction" is the date the permit was issued

- Must begin within 180 days of permit date

**Structure** means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. Structure, for insurance purposes, means:

(1) A building with two or more outside rigid walls and a fully secured roof, that is affixed to a permanent site;

(2) A manufactured home ("a manufactured home," also known as a mobile home, is a structure: built on a permanent chassis, transported to its site in one or more sections, and affixed to a permanent foundation); or

(3) A travel trailer without wheels, built on a chassis and affixed to a permanent foundation, that is regulated under the community's floodplain management and building ordinances or laws. For the latter purpose, "structure" does not mean a recreational vehicle or a park trailer or other similar vehicle, except as described in paragraph (3) of this definition, or a gas or liquid storage tank.

**Subsidized rates** mean the rates established by the Administrator involving in the aggregate a subsidization by the Federal Government.

**Substantial damage** means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**Substantial improvement** means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

(1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or

(2) Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure" 30-year setback means a distance equal to 30 times the average annual long term recession rate at a site, measured from the reference feature.

**30-year setback** means a distance equal to 30 times the average annual long term recession rate at a site, measured from the reference feature.

**Technically incorrect.** The methodology(ies) utilized has been erroneously applied due to mathematical or measurement error, changed physical conditions, or insufficient quantity or quality of input data.

**V Zone**--see "coastal high hazard area."

**Variance** means a grant of relief by a community from the terms of a flood plain management regulation.

Note the differences in the definition of the term "structure" for compliance vs insurance purposes

Substantial Damage can result from any origin for floodplain management purposes.

- One exception: reference 60.3(c)(6)(iv)

Before any compliance related action is required, all of the following three conditions must exist:

- The structure is located in the SFHA
- The structure is non-compliant by current standards
- The structure must be declared substantially damage/improved by the proper community authority

If any 1 of the 3 are not present, there is no Substantial Improvement/Damage issue

Compare "Variance" with "Exception"

**Violation** means the failure of a structure or other development to be fully compliant with the community's flood plain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Sec. 60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

**Water surface elevation** means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or other datum, where specified) of floods of various magnitudes and frequencies in the flood plains of coastal or riverine areas.

**Zone of imminent collapse** means an area subject to erosion adjacent to the shoreline of an ocean, bay, or lake and within a distance equal to 10 feet plus 5 times the average annual long-term erosion rate for the site, measured from the reference feature.



Sec. 59.2 Description of program.

(a) The National Flood Insurance Act of 1968 was enacted by title XIII of the Housing and Urban Development Act of 1968 (Pub. L. 90-448, August 1, 1968) to provide previously unavailable flood insurance protection to property owners in flood-prone areas. Mudslide (as defined in Sec. 59.1) protection was added to the Program by the Housing and Urban Development Act of 1969 (Pub. L. 91-152, December 24, 1969). Flood-related erosion (as defined in Sec. 59.1) protection was added to the Program by the Flood Disaster Protection Act of 1973 (Pub. L. 93-234, December 31, 1973). The Flood Disaster Protection Act of 1973 requires the purchase of flood insurance on and after March 2, 1974, as a condition of receiving any form of Federal or federally-related financial assistance for acquisition or construction purposes with respect to insurable buildings and mobile homes within an identified special flood, mudslide (i.e., mudflow), or flood-related erosion hazard area that is located within any community participating in the Program. The Act also requires that on and after July 1, 1975, or one year after a community has been formally notified by the Administrator of its identification as community containing one or more special flood, mudslide (i.e., mudflow), or flood-related erosion hazard areas, no such Federal financial assistance, shall be provided within such an area unless the community in which the area is located is then participating in the Program, subject to certain exceptions. See FIA published Guidelines at Sec. 59.4(c).

(b) To qualify for the sale of federally-subsidized flood insurance a community must adopt and submit to the Administrator as part of its application, flood plain management regulations, satisfying at a minimum the criteria set forth at part 60 of this subchapter, designed to reduce or avoid future flood, mudslide (i.e., mudflow) or flood-related erosion damages. These regulations must include effective enforcement provisions.

(c) Minimum requirements for adequate flood plain management regulations are set forth in Sec. 60.3 for flood-prone areas, in Sec. 60.4 for mudslide (i.e., mudflow) areas and in Sec. 60.5 for flood-related erosion areas. Those applicable requirements and standards are based on the amount of technical information available to the community.

Sec. 59.3 Emergency program.

The 1968 Act required a risk study to be undertaken for each community before it could become eligible for the sale of flood insurance. Since this requirement resulted in a delay in providing insurance, the Congress, in section 408 of the Housing and Urban Development Act of 1969 (Pub. L. 91-152, December 24, 1969), established an Emergency Flood Insurance Program as a new section 1336 of the National Flood Insurance Act (42 U.S.C. 4056) to permit the early sale of insurance in flood-prone

NFIP DESCRIPTION

Community participation required for availability of Federal financial assistance

Community must adopt and effectively enforce at least the minimum standards in accordance with Section 60.3

Emergency Program

Compare "Emergency Program" and "Regular Program" definitions in 59.1

communities. The emergency program does not affect the requirement that a community must adopt adequate flood plain management regulations pursuant to part 60 of this subchapter but permits insurance to be sold before a study is conducted to determine risk premium rates for the community. The program still requires upon the effective date of a FIRM the charging of risk premium rates for all new construction and substantial improvements and for higher limits of coverage for existing structures.

## Sec. 59.4 References.

(a) The following are statutory references for the National Flood Insurance Program, under which these regulations are issued:

(1) National Flood Insurance Act of 1968 (title XIII of the Housing and Urban Development Act of 1968), Pub. L. 90-448, approved August 1, 1968, 42 U.S.C. 4001 et seq.

(2) Housing and Urban Development Act of 1969 (Pub. L. 91-152, approved December 24, 1969).

(3) Flood Disaster Protection Act of 1973 (87 Stat. 980), Public Law 93-234, approved December 31, 1973.

(4) Section 816 of the Housing and Community Development Act of 1974

(87 Stat. 975), Public Law 93-383, approved August 22, 1974.

(5) Public Law 5-128 (effective October 12, 1977).

(6) The above statutes are included in 42 U.S.C. 4001 et seq.

(b) The following are references relevant to the National Flood Insurance Program:

(1) Executive Order 11988 (Floodplain Management, dated May 24, 1977 (42 FR 26951, May 25, 1977)).

(2) The Flood Control Act of 1960 (Pub. L. 86-645).

(3) Title II, section 314 of title III and section 406 of title IV of the Disaster Relief Act of 1974 (Pub. L. 93-288).

(4) Coastal Zone Management Act (Pub. L. 92-583), as amended Public Law 94-370.

(5) Water Resources Planning Act (Pub. L. 89-90), as amended Public Law 94-112 (October 16, 1975).

(6) Title I, National Environmental Policy Act (Pub. L. 91-190).

(7) Land and Water Conservation Fund Act (Pub. L. 89-578), and subsequent amendments thereto.

(8) Water Resources Council, Principals and Standards for Planning, Water and Related Land Resources (38 FR 24778-24869, September 10, 1973).

(9) Executive Order 11593 (Protection and Enhancement of the Cultural Environment), dated May 13, 1971 (36 FR 8921, May 15, 1971).

(10) 89th Cong., 2nd Session, H.D. 465.

Major references governing the establishment and conduct of local NFIP Programs

(11) Required land use element for comprehensive planning assistance under section 701 of the Housing Act of 1954, as amended by the Housing and Community Development Act of 1974 (24 CFR 600.72).

(12) Executive Order 11990 (Protection of Wetlands, dated May 24, 1977 (42 FR 26951, May 25, 1977)).

(13) Water Resources Council (Guidance for Floodplain Management) (42 FR 52590, September 30, 1977).

(14) Unified National Program for Floodplain Management of the United States Water Resources Council, July 1976.

(c) The following reference guidelines represent the views of the Federal Insurance Administration with respect to the mandatory purchase of flood insurance under section 102 of the Flood Disaster Protection Act of 1973: Mandatory Purchase of Flood Insurance Guidelines (54 FR 29666-29695, July 13, 1989).

Sec 59.21 Not included

Sec. 59.22 Prerequisites for the sale of flood insurance.

(a) To qualify for flood insurance availability a community shall apply for the entire area within its jurisdiction, and shall submit:

(1) Copies of legislative and executive actions indicating a local need for flood insurance and an explicit desire to participate in the National Flood Insurance Program;

(2) Citations to State and local statutes and ordinances authorizing actions regulating land use and copies of the local laws and regulations cited;

(3) A copy of the flood plain management regulations the community has adopted to meet the requirements of Sec. 60.3, 60.4 and/or Sec. 60.5 of this subchapter. This submission shall include copies of any zoning, building, and subdivision regulations, health codes, special purpose ordinances (such as a flood plain ordinance, grading ordinance, or flood-related erosion control ordinance), and any other corrective and preventive measures enacted to reduce or prevent flood, mudslide (i.e., mudflow) or flood-related erosion damage;

(4) A list of the incorporated communities within the applicant's boundaries;

(5) Estimates relating to the community as a whole and to the flood, mudslide (i.e., mudflow) and flood-related erosion prone areas concerning:

- (i) Population;
- (ii) Number of one to four family residences;
- (iii) Number of small businesses; and
- (iv) Number of all other structures.

This Section is the basis for the Resolution adopted by NFIP communities.

59.22 = The "Ground Rules"

Revised: May 31, 2007

<p>(b) An applicant shall legislatively:</p> <p>(1) Appoint or designate the agency or official with the responsibility, authority, and means to implement the commitments made in paragraph (a) of this section, and</p> <p>(2) Designate the official responsible to submit a report to the Administrator concerning the community participation in the Program, including, but not limited to the development and implementation of flood plain management regulations. This report shall be submitted annually or biennially as determined by the Administrator.</p> <p>(c) The documents required by paragraph (a) of this section and evidence of the actions required by paragraph (b) of this section shall be submitted to the Federal Emergency Management Agency, Washington DC 20472.</p>	
<p>Sec. 59.23 Priorities for the sale of flood insurance under the regular program.</p> <p>Flood-prone, mudslide (i.e., mudflow) and flood-related erosion prone communities are placed on a register of areas eligible for ratemaking studies and then selected from this register for ratemaking studies on the basis of the following considerations--</p> <p>(a) Recommendations of State officials;</p> <p>(b) Location of community and urgency of need for flood insurance;</p> <p>(c) Population of community and intensity of existing or proposed development of the flood plain, the mud slide (i.e., mudflow) and the flood-related erosion area;</p> <p>(d) Availability of information on the community with respect to its flood, mudslide (i.e., mudflow) and flood-related erosion characteristics and previous losses;</p> <p>(e) Extent of State and local progress in flood plain, mudslide (i.e., mudflow) area and flood-related erosion area management, including adoption of flood plain management regulations consistent with related ongoing programs in the area.</p>	<p>Prioritization of communities for flood studies and maps</p>
<p>Sec. 59.24 Suspension of community eligibility.</p> <p>(a) A community eligible for the sale of flood insurance shall be subject to suspension from the Program for failing to submit copies of adequate flood plain management regulations meeting the minimum requirements of paragraphs (b), (c), (d), (e) or (f) of Sec.60.3 or paragraph (b) of Sec.60.4 or Sec.60.5, within six months from the date the Administrator provides the data upon which the flood plain regulations for the applicable paragraph shall be based. Where there has not been any submission by the community, the Administrator shall notify the community that 90 days remain in the six month period in order to submit adequate flood plain management regulations. Where</p>	<p>SUSPENSION &amp; PROBATION</p> <p>Suspension from the NFIP for failure to adopt standards.</p>

there has been an inadequate submission, the Administrator shall notify the community of the specific deficiencies in its submitted flood plain management regulations and inform the community of the amount of time remaining within the six month period. If, subsequently, copies of adequate flood plain management regulations are not received by the administrator, no later than 30 days before the expiration of the original six month period the Administrator shall provide written notice to the community and to the state and assure publication in the Federal Register under part 64 of this subchapter of the community's loss of eligibility for the sale of flood insurance, such suspension to become effective upon the expiration of the six month period. Should the community remedy the defect and the Administrator receive copies of adequate flood plain management regulations within the notice period, the suspension notice shall be rescinded by the Administrator. If the Administrator receives notice from the State that it has enacted adequate flood plain management regulations for the community within the notice period, the suspension notice shall be rescinded by the Administrator. The community's eligibility shall remain terminated after suspension until copies of adequate flood plain management regulations have been received and approved by the Administrator.

(b) A community eligible for the sale of flood insurance which fails to adequately enforce flood plain management regulations meeting the minimum requirements set forth in Sec. 60.3, 60.4 and/or 60.5 shall be subject to probation. Probation shall represent formal notification to the community that the Administrator regards the community's flood plain management program as not compliant with NFIP criteria. Prior to imposing probation, the Administrator (1) shall inform the community upon 90 days prior written notice of the impending probation and of the specific program deficiencies and violations relative to the failure to enforce, (2) shall, at least 60 days before probation is to begin, issue a press release to local media explaining the reasons for and the effects of probation, and (3) shall, at least 90 days before probation is to begin, advise all policyholders in the community of the impending probation and the additional premium that will be charged, as provided in this paragraph, on policies sold or renewed during the period of probation. During this 90-day period the community shall have the opportunity to avoid probation by demonstrating compliance with Program requirements, or by correcting Program deficiencies and remedying all violations to the maximum extent possible. If, at the end of the 90-day period, the Administrator determines that the community has failed to do so, the probation shall go into effect. Probation may be continued for up to one year after the community corrects all Program deficiencies and remedies all violations to the maximum extent possible. Flood insurance may be sold or renewed in the community while it is on probation. Where a policy covers property located in a community placed on probation on or after October 1, 1986, but prior to October 1, 1992, an additional

Probation for failure to enforce floodplain regulations.

- Notification,
- Press release,
- Advise policy holders

Probation Process

premium of \$25.00 shall be charged on each such policy newly issued or renewed during the one-year period beginning on the date the community is placed on probation and during any successive one-year periods that begin prior to October 1, 1992. Where a community's probation begins on or after October 1, 1992, the additional premium described in the preceding sentence shall be \$50.00, which shall also be charged during any successive one-year periods during which the community remains on probation for any part thereof. This \$50.00 additional premium shall further be charged during any successive one-year periods that begin on or after October 1, 1992, where the preceding one-year probation period began prior to October 1, 1992.

(c) A community eligible for the sale of flood insurance which fails to adequately enforce its flood plain management regulations meeting the minimum requirements set forth in Sec. 60.3, 60.4 and/or 60.5 and does not correct its Program deficiencies and remedy all violations to the maximum extent possible in accordance with compliance deadlines established during a period of probation shall be subject to suspension of its Program eligibility. Under such circumstances, the Administrator shall grant the community 30 days in which to show cause why it should not be suspended. The Administrator may conduct a hearing, written or oral, before commencing suspensive action. If a community is to be suspended, the Administrator shall inform it upon 30 days prior written notice and upon publication in the Federal Register under part 64 of this subchapter of its loss of eligibility for the sale of flood insurance. In the event of impending suspension, the Administrator shall issue a press release to the local media explaining the reasons and effects of the suspension. The community's eligibility shall only be reinstated by the Administrator upon his receipt of a local legislative or executive measure reaffirming the community's formal intent to adequately enforce the flood plain management requirements of this subpart, together with evidence of action taken by the community to correct Program deficiencies and remedy to the maximum extent possible those violations which caused the suspension. In certain cases, the Administrator, in order to evaluate the community's performance under the terms of its submission, may withhold reinstatement for a period not to exceed one year from the date of his receipt of the satisfactory submission or place the community on probation as provided for in paragraph (b) of this section.

(d) A community eligible for the sale of flood insurance which repeals its flood plain management regulations, allows its regulations to lapse, or amends its regulations so that they no longer meet the minimum requirements set forth in Sec. 60.3, 60.4 and/or 60.5 shall be suspended from the Program. If a community is to be suspended, the Administrator shall inform it upon 30 days prior written notice and upon publication in the Federal Register under part 64 of this subchapter of its loss of eligibility for the sale of flood insurance. The community eligibility shall

Probation can continue for up to 1 year after the community corrects all program deficiencies to the maximum extent possible.

\$50 policy surcharge

Suspension for failure to enforce local Regulation after Probation

Suspension for failure to maintain adequate local Regulation.

<p>remain terminated after suspension until copies of adequate flood plain management regulations have been received and approved by the Administrator.</p> <p>(e) A community eligible for the sale of flood insurance may withdraw from the Program by submitting to the Administrator a copy of a legislative action that explicitly states its desire to withdraw from the National Flood Insurance Program. Upon receipt of a certified copy of a final legislative action, the Administrator shall withdraw the community from the Program and publish in the Federal Register under part 64 of this subchapter its loss of eligibility for the sale of flood insurance. A community that has withdrawn from the Program may be reinstated if it submits the application materials specified in Sec. 59.22(a).</p> <p>(f) If during a period of ineligibility under paragraphs (a), (d), or (e) of this section, a community has permitted actions to take place that have aggravated existing flood plain, mudslide (i.e., mudflow) and/or flood related erosion hazards, the Administrator may withhold reinstatement until the community submits evidence that it has taken action to remedy to the maximum extent possible the increased hazards. The Administrator may also place the reinstated community on probation as provided for in paragraph (b) of this section.</p> <p>(g) The Administrator shall promptly notify the servicing company and any insurers issuing flood insurance pursuant to an arrangement with the Administrator of those communities whose eligibility has been suspended or which have withdrawn from the program. Flood insurance shall not be sold or renewed in those communities. Policies sold or renewed within a community during a period of ineligibility are deemed to be voidable by the Administrator whether or not the parties to sale or renewal had actual notice of the ineligibility.</p> <p>Sec. 60.1 Purpose of subpart.</p> <p>(a) The Act provides that flood insurance shall not be sold or renewed under the program within a community, unless the community has adopted adequate flood plain management regulations consistent with Federal criteria. Responsibility for establishing such criteria is delegated to the Administrator.</p> <p>(b) This subpart sets forth the criteria developed in accordance with the Act by which the Administrator will determine the adequacy of a community's flood plain management regulations. These regulations must be legally-enforceable, applied uniformly throughout the community to all privately and publicly owned land within flood-prone, mudslide (i.e., mudflow) or flood-related erosion areas, and the community must provide that the regulations take precedence over any less restrictive conflicting local laws, ordinances or codes. Except as otherwise provided in Sec. 60.6, the adequacy of such regulations shall be determined on the basis of the standards set forth in Sec. 60.3 for</p>	<p>Voluntary Withdrawal from the NFIP</p> <p>Non-compliant development during period of ineligibility</p> <p>Must remedy to the maximum extent possible prior to reinstatement</p> <p>Policies sold or renewed when a community is ineligible for flood insurance are voidable, <u>whether or not the parties requesting the policy had actual notice of ineligibility.</u></p> <p>Local Regulations must be:</p> <ul style="list-style-type: none"> <li>• Legally enforceable</li> <li>• Applied uniformly</li> <li>• Take precedence over any less restrictive conflicting laws</li> </ul>
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flood-prone areas, Sec. 60.4 for mudslide areas and Sec. 60.5 for flood-related erosion areas.

(c) Nothing in this subpart shall be construed as modifying or replacing the general requirement that all eligible communities must take into account flood, mudslide (i.e., mudflow) and flood-related erosion hazards, to the extent that they are known, in all official actions relating to land management and use.

(d) The criteria set forth in this subpart are minimum standards for the adoption of flood plain management regulations by flood-prone, mudslide (i.e., mudflow)-prone and flood-related erosion-prone communities. Any community may exceed the minimum criteria under this part by adopting more comprehensive flood plain management regulations utilizing the standards such as contained in subpart C of this part. In some instances, community officials may have access to information or knowledge of conditions that require, particularly for human safety, higher standards than the minimum criteria set forth in subpart A of this part. Therefore, any flood plain management regulations adopted by a State or a community which are more restrictive than the criteria set forth in this part are encouraged and shall take precedence.

#### Sec. 60.2 Minimum compliance with flood plain management criteria.

(a) A flood-prone community applying for flood insurance eligibility shall meet the standards of Sec.60.3(a) in order to become eligible if a FHBM has not been issued for the community at the time of application. Thereafter, the community will be given a period of six months from the date the Administrator provides the data set forth in Sec.60.3(b), (c), (d), (e) or (f), in which to meet the requirements of the applicable paragraph. If a community has received a FHBM, but has not yet applied for Program eligibility, the community shall apply for eligibility directly under the standards set forth in Sec.60.3(b). Thereafter, the community will be given a period of six months from the date the Administrator provides the data set forth in Sec.60.3(c), (d), (e) or (f) in which to meet the requirements of the applicable paragraph.

(b) A mudslide (i.e., mudflow)-prone community applying for flood insurance eligibility shall meet the standards of Sec. 60.4(a) to become eligible. Thereafter, the community will be given a period of six months from the date the mudslide (i.e., mudflow) areas having special mudslide hazards are delineated in which to meet the requirements of Sec. 60.4(b).

(c) A flood-related erosion-prone community applying for flood insurance eligibility shall meet the standards of Sec. 60.5(a) to become eligible. Thereafter, the community will be given a period of six months from the date the flood-related erosion areas having special erosion hazards are delineated in which to meet the requirements of Sec. 60.5(b).

#### Minimum Standards

Communities may exceed minimum standards and are encouraged to do so

(d) Communities identified in part 65 of this subchapter as containing more than one type of hazard (e.g., any combination of special flood, mudslide (i.e., mudflow), and flood-related erosion hazard areas) shall adopt flood plain management regulations for each type of hazard consistent with the requirements of Sec. 60.3, 60.4 and 60.5.

(e) Local flood plain management regulations may be submitted to the State Coordinating Agency designated pursuant to Sec. 60.25 for its advice and concurrence. The submission to the State shall clearly describe proposed enforcement procedures.

(f) The community official responsible for submitting annual or biennial reports to the Administrator pursuant to Sec. 59.22(b)(2) of this subchapter shall also submit copies of each annual or biennial report to any State Coordinating Agency.

(g) A community shall assure that its comprehensive plan is consistent with the flood plain management objectives of this part.

(h) The community shall adopt and enforce flood plain management regulations based on data provided by the Administrator. Without prior approval of the Administrator, the community shall not adopt and enforce flood plain management regulations based upon modified data reflecting natural or man-made physical changes.

**Sec. 60.3 Flood plain management criteria for flood-prone areas.**

The Administrator will provide the data upon which flood plain management regulations shall be based. If the Administrator has not provided sufficient data to furnish a basis for these regulations in a particular community, the community shall obtain, review and reasonably utilize data available from other Federal, State or other sources pending receipt of data from the Administrator. However, when special flood hazard area designations and water surface elevations have been furnished by the Administrator, they shall apply. The symbols defining such special flood hazard designations are set forth in Sec. 64.3 of this subchapter. In all cases the minimum requirements governing the adequacy of the flood plain management regulations for flood-prone areas adopted by a particular community depend on the amount of technical data formally provided to the community by the Administrator. Minimum standards for communities are as follows:

(a) When the Administrator has not defined the special flood hazard areas within a community, has not provided water surface elevation data, and has not provided sufficient data to identify the floodway or coastal high hazard area, but the community has indicated the presence of such hazards by submitting an application to participate in the Program, the community shall:

(1) Require permits for all proposed construction or other development in the community, including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas;

(2) Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334;

(3) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

**BASIS OF  
COMMUNITY NFIP  
REGULATION AND  
ENFORCEMENT**

Sec 60.3 is the primary location in the Regulation for the identification of overall minimum floodplain management standards

**LEVEL "A"  
STANDARDS:**

No Maps. No FIS

- Must permit all development because no other method identifies flood risk
- Must have all necessary permits
- Development must be "reasonably safe from flooding"
- For definition of "reasonably safe from flooding" reference 65.2(c)
- Must be anchored
- Use flood resistant materials
- Construction methods must minimize flooding
- Utilities and service equipment must be located properly so flood waters could not enter or accumulate during flooding
- All development

## NO FLOOD MAP

60.3-60.3(a)

(4) Review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is in a flood-prone area, any such proposals shall be reviewed to assure that (i) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (ii) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage, and (iii) adequate drainage is provided to reduce exposure to flood hazards;

(5) Require within flood-prone areas new and replacement water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems; and

(6) Require within flood-prone areas (i) new and replacement sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and (ii) onsite waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.

proposals are consistent with the need to minimize flood damage

- All public utilities and systems must be designed to minimize or eliminate the infiltration of flood waters
- Sanitary sewer systems must be designed to also minimize or eliminate discharges into flood waters

Reference: TB 2, 7

(b) When the Administrator has designated areas of special flood hazards (A zones) by the publication of a community's FHBM or FIRM, but has neither produced water surface elevation data nor identified a floodway or coastal high hazard area, the community shall:

(1) Require permits for all proposed construction and other developments including the placement of manufactured homes, within Zone A on the community's FHBM or FIRM;

(2) Require the application of the standards in paragraphs (a) (2), (3), (4), (5) and (6) of this section to development within Zone A on the community's FHBM or FIRM;

(3) Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data;

(4) Obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, including data developed pursuant to paragraph (b)(3) of this section, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the community's FHBM or FIRM meet the standards in paragraphs (c)(2), (c)(3), (c)(5), (c)(6), (c)(12), (c)(14), (d)(2) and (d)(3) of this section;

(5) Where base flood elevation data are utilized, within Zone A on the community's FHBM or FIRM:

(i) Obtain the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures, and (ii) Obtain, if the structure has been floodproofed in accordance with paragraph (c)(3)(ii) of this section, the elevation (in relation to mean sea level) to which the structure was floodproofed, and

(iii) Maintain a record of all such information with the official designated by the community under Sec. 59.22 (a)(9)(iii);

(6) Notify, in riverine situations, adjacent communities and the State Coordinating Office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Administrator;

(7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained;

(8) Require that all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces.

## LEVEL "B" STANDARDS

FHBM only – no BFEs.  
No FIS

- Require floodplain development permits only for development in the SFHA
- Require all "Level a" requirements except 60.3(a)(1).
- Base flood data required for developments of 50 lots or 5 acres, whichever is less

See Endnote #2 for (b)(3) and (b)(4)

Notification requirements if a watercourse is changed

Assure that the flood carrying capacity of an altered watercourse is maintained

Manufactured homes must be elevated and anchored

## AE ZONES WITH BFES

60.3(c)

(c) When the Administrator has provided a notice of final flood elevations for one or more special flood hazard areas on the community's FIRM and, if appropriate, has designated other special flood hazard areas without base flood elevations on the community's FIRM, but has not identified a regulatory floodway or coastal high hazard area, the community shall:

(1) Require the standards of paragraph (b) of this section within all A1-30 zones, AE zones, A zones, AH zones, and AO zones, on the community's FIRM;

(2) Require that all new construction and substantial improvements of residential structures within Zones A1-30, AE and AH zones on the community's FIRM have the lowest floor (including basement) elevated to or above the base flood level, unless the community is granted an exception by the Administrator for the allowance of basements in accordance with Sec. 60.6 (b) or (c);

(3) Require that all new construction and substantial improvements of non-residential structures within Zones A1-30, AE and AH zones on the community's firm (i) have the lowest floor (including basement) elevated to or above the base flood level or, (ii) together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

(4) Provide that where a non-residential structure is intended to be made watertight below the base flood level, (i) a registered professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of paragraph (c)(3)(ii) or (c)(8)(ii) of this section, and (ii) a record of such certificates which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained with the official designated by the community under Sec. 59.22(a)(9)(iii);

(5) Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding

### LEVEL "C" STANDARDS:

Detailed flood studies with FIS and BFES.

Floodway not delineated

- Incorporates all level "a" and "b" level standards except (a)(1)
- Residential structures must be elevated to or above the BFE
- If a basement is present, it will be the lowest floor
- Non-residential structures must be either elevated so the lowest floor is at or above the BFE or the structure must be dry floodproofed (watertight) to or above the BFE. Note: insurance requirements mandate floodproofing to at least one foot above BFE.
- An engineer or architect must certify Floodproofing design and construction.

Reference: TB 3

Enclosures may only be used for (1) parking, (2) limited storage, or (3) access to the elevated living area.

Enclosures must have at least two openings with a total area of at least one square inch for every

shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(6) Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the community's FIRM on sites

- (i) Outside of a manufactured home park or subdivision,
- (ii) In a new manufactured home park or subdivision,
- (iii) In an expansion to an existing manufactured home park or subdivision, or
- (iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist floatation collapse and lateral movement.

(7) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified);

(8) Require within any AO zone on the community's FIRM that all new construction and substantial improvements of nonresidential structures (i) have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or (ii) together with attendant utility and sanitary facilities be completely floodproofed to that level to meet the floodproofing standard specified in Sec. 60.3(c)(3)(ii);

(9) Require within any A99 zones on a community's FIRM the standards of paragraphs (a)(1) through (a)(4)(i) and (b)(5) through (b)(9)

square foot of the enclosed area subject to flooding.

Reference: TB 1, 2

NOTE: the NFIP Regulation does not mandate on which walls the openings must be located. However, insurance guidance and TB 1 stipulate the openings must be on different walls.

Requirements for Manufactured Homes in a new (post-FIRM) MHP

- Elevated on a permanent foundation
- Lowest floor at or above BFE
- Securely anchored to an adequately anchored foundation system

AO Zone requirements

AO Zones do not have BFEs. Elevation in relation to the highest adjacent grade or the depth number listed on the FIRM are the only measurements required.

## AE ZONES WITH BFES

## 60.3(c)

of this section;

(10) Require until a regulatory floodway is designated, that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

If no floodway is designated, development may not occur until an engineering study is accomplished demonstrating no more than a 1-foot rise in BFE results. The study must include the cumulative effects of :

- All unmapped development accomplished to date
- The current project
- All anticipated development

If a rise exceeding 1 foot occurs that cannot be rectified, go directly to Section 65.12 and accomplish all of the applicable steps. A violation could occur if the appropriate steps are not taken prior to the development.

(11) Require within Zones AH and AO, adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(12) Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A-1-30, AH, and AE on the community's FIRM that are not subject to the provisions of paragraph (c)(6) of this section be elevated so that either

(i) The lowest floor of the manufactured home is at or above the base flood elevation, or

(ii) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist floatation, collapse, and lateral movement.

(13) Notwithstanding any other provisions of Sec. 60.3, a community may approve certain development in Zones A1-30, AE, and AH, on the community's FIRM which increase the water surface elevation of the base flood by more than one foot, provided that the

Manufactured Homes in an existing (pre-FIRM) MHP

• Lowest floor of MH is at or above BFE  
OR

• MH is supported on piers no less than 36 inches above grade

AND

Securely anchored.

If the provisions of (c)(10) are exceeded, accomplish 65.12



## AE ZONES WITH BFES

60.3(c)

community first applies for a conditional FIRM revision, fulfills the requirements for such a revision as established under the provisions of Sec. 65.12, and receives the approval of the Administrator.

(14) Require that recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's FIRM either

- (i) Be on the site for fewer than 180 consecutive days,
- (ii) Be fully licensed and ready for highway use, or
- (iii) Meet the permit requirements of paragraph (b)(1) of this section and the elevation and anchoring requirements for "manufactured homes" in paragraph (c)(6) of this section.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

Recreational Vehicle requirements:

- Be on site for fewer than 180 days,

OR

- Be fully licensed and ready for highway use,

OR

- Meet the requirements for a "manufactured home"

NOTE: only 1 of the options above is necessary

(d) When the Administrator has provided a notice of final base flood elevations within Zones A1-30 and/or AE on the community's FIRM and, if appropriate, has designated AO zones, AH zones, A99 zones, and A zones on the community's FIRM, and has provided data from which the community shall designate its regulatory floodway, the community shall:

(1) Meet the requirements of paragraphs (c) (1) through (14) of this section;

(2) Select and adopt a regulatory floodway based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one foot at any point;

(3) Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge;

(4) Notwithstanding any other provisions of Sec. 60.3, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood elevations, provided that the community first applies for a conditional FIRM and floodway revision, fulfills the requirements for such revisions as established under the provisions of Sec. 65.12, and receives the approval of the Administrator.

**LEVEL "D"  
STANDARDS:**

Detailed flood studies with FIS and BFEs. Floodway is now delineated.

- Meet all requirements of a, b, and c levels, except for (a)(1)
- Select and adopt a regulatory floodway
- Prohibit encroachments or any type of development in the floodway unless it has been demonstrated by a complete engineering study that such activity will not result in any rise in BFE.
- A rise in BFE can be allowed only by accomplishing all of the applicable steps in Sec 65.12.

(e) When the Administrator has provided a notice of final base flood elevations within Zones A1-30 and/or AE on the community's FIRM and, if appropriate, has designated AH zones, AO zones, A99 zones, and A zones on the community's FIRM, and has identified on the community's FIRM coastal high hazard areas by designating Zones V1-30, VE, and/or V, the community shall:

(1) Meet the requirements of paragraphs (c)(1) through (14) of this section;

(2) Within Zones V1-30, VE, and V on a community's FIRM, (i) obtain the elevation (in relation to mean sea level) of the bottom of the lowest structural member of the lowest floor (excluding pilings and columns) of all new and substantially improved structures, and whether or not such structures contain a basement, and (ii) maintain a record of all such information with the official designated by the community under Sec. 59.22(a)(9)(iii);

(3) Provide that all new construction within Zones V1-30, VE, and V on the community's FIRM is located landward of the reach of mean high tide;

(4) Provide that all new construction and substantial improvements in Zones V1-30 and VE, and also Zone V if base flood elevation data is available, on the community's FIRM, are elevated on pilings and columns so that (i) the bottom of the lowest horizontal structural member of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level; and (ii) the pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of paragraphs (e)(4) (i) and (ii) of this section.

(5) Provide that all new construction and substantial improvements within Zones V1-30, VE, and V on the community's FIRM have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakway walls which exceed a design safe loading

#### **LEVEL "E" STANDARDS:**

Detailed flood studies with FIS, BFEs, plus "coastal" requirements.

Note that level "e" incorporates (c)(1) thru (c)(14) and does not incorporate level (d) provisions. By definition, floodways do not exist in coastal areas.

- Require, for compliance purposes, that the lowest structural member of the lowest floor be elevated to or above the BFE.
- New construction must be located landward of mean high tide.
- Foundation elements must be securely anchored to avoid the effects of water and wind.

References: TB 5, 8, 9, and Coastal Construction Manual

Free of Obstruction

Breakaway Walls

resistance of 20 pounds per square foot (either by design or when so required by local or State codes) may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

(i) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and,

(ii) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components (structural and non-structural). Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable State or local building standards.

Such enclosed space shall be useable solely for parking of vehicles, building access, or storage.

(6) Prohibit the use of fill for structural support of buildings within Zones V1-30, VE, and V on the community's FIRM;

(7) Prohibit man-made alteration of sand dunes and mangrove stands within Zones V1-30, VE, and V on the community's FIRM which would increase potential flood damage.

(8) Require that manufactured homes placed or substantially improved within Zones V1-30, V, and VE on the community's FIRM on sites

(i) Outside of a manufactured home park or subdivision,

(ii) In a new manufactured home park or subdivision,

(iii) In an expansion to an existing manufactured home park or subdivision, or

(iv) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, meet the standards of paragraphs (e)(2) through (7) of this section and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V, and VE on the community's FIRM meet the requirements of paragraph (c)(12) of this section.

(9) Require that recreational vehicles placed on sites within Zones V1-30, V, and VE on the community's FIRM either

(i) Be on the site for fewer than 180 consecutive days,

(ii) Be fully licensed and ready for highway use, or

(iii) Meet the requirements in paragraphs (b)(1) and (e) (2) through (7) of this section.

A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

Prohibit fill for structural support of buildings

Prohibit man-made alterations of sand dunes and mangrove stands

Manufactured Home requirements in a V Zone

Recreation Vehicle provisions in "V" Zone

(f) When the Administrator has provided a notice of final base flood elevations within Zones A1-30 or AE on the community's FIRM, and, if appropriate, has designated AH zones, AO zones, A99 zones, and A zones on the community's FIRM, and has identified flood protection restoration areas by designating Zones AR, AR/A1-30, AR/AE, AR/AH, AR/AO, or AR/A, the community shall:

(1) Meet the requirements of paragraphs (c)(1) through (14) and (d)(1) through (4) of this section.

(2) Adopt the official map or legal description of those areas within Zones AR, AR/A1-30, AR/AE, AR/AH, AR/A, or AR/AO that are designated developed areas as defined in Sec.59.1 in accordance with the eligibility procedures under Sec.65.14.

(3) For all new construction of structures in areas within Zone AR that are designated as developed areas and in other areas within Zone AR where the AR flood depth is 5 feet or less:

(i) Determine the lower of either the AR base flood elevation or the elevation that is 3 feet above highest adjacent grade; and

(ii) Using this elevation, require the standards of paragraphs (c)(1) through (14) of this section.

(4) For all new construction of structures in those areas within Zone AR that are not designated as developed areas where the AR flood depth is greater than 5 feet:

(i) Determine the AR base flood elevation; and

(ii) Using that elevation require the standards of paragraphs (c)(1) through (14) of this section.

(5) For all new construction of structures in areas within Zone AR/A1-30, AR/AE, AR/AH, AR/AO, and AR/A:

(i) Determine the applicable elevation for Zone AR from paragraphs (a)(3) and (4) of this section;

(ii) Determine the base flood elevation or flood depth for the underlying A1-30, AE, AH, AO and A Zone; and

(iii) Using the higher elevation from paragraphs (a)(5)(i) and (ii) of this section require the standards of paragraphs (c)(1) through (14) of this section.

(6) For all substantial improvements to existing construction within Zones AR/A1-30, AR/AE, AR/AH, AR/AO, and AR/A:

(i) Determine the A1-30 or AE, AH, AO, or A Zone base flood elevation; and

(ii) Using this elevation apply the requirements of paragraphs (c)(1) through (14) of this section.

(7) Notify the permit applicant that the area has been designated as an AR, AR/A1-30, AR/AE, AR/AH, AR/AO, or AR/A Zone and whether the structure will be elevated or protected to or above the AR base flood elevation.

AR Zones

Note the definition of AR Zone in the table of 64.3

Sec. 60.6 Variances and exceptions.

(a) The Administrator does not set forth absolute criteria for granting variances from the criteria set forth in Sec. 60.3, 60.4, and 60.5. The issuance of a variance is for flood plain management purposes only. Insurance premium rates are determined by statute according to actuarial risk and will not be modified by the granting of a variance. The community, after examining the applicant's hardships, shall approve or disapprove a request. While the granting of variances generally is limited to a lot size less than one-half acre (as set forth in paragraph (a)(2) of this section), deviations from that limitation may occur. However, as the lot size increases beyond one-half acre, the technical justification required for issuing a variance increases. The Administrator may review a community's findings justifying the granting of variances, and if that review indicates a pattern inconsistent with the objectives of sound flood plain management, the Administrator may take appropriate action under Sec. 59.24(b) of this subchapter. Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure. Procedures for the granting of variances by a community are as follows:

(1) Variances shall not be issued by a community within any designated regulatory floodway if any increase in flood levels during the base flood discharge would result;

(2) Variances may be issued by a community for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, in conformance with the procedures of paragraphs (a) (3), (4), (5) and (6) of this section;

(3) Variances shall only be issued by a community upon (i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant, and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;

(4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;

(5) A community shall notify the applicant in writing over the signature of a community official that (i) the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100

VARIANCES

- *Avoid allowing variances whenever possible*
- Insurance premiums may rise significantly
- Variances generally limited to one-half acre or less

Variances for Historical Structures

Reference the definition of Historic Structure in Section 59.1 of this document.

Variances for development in the floodway shall not be allowed if there is any rise in BFE. Use of 65.12 is NOT an option.

½ Acre Requirement

Variances may be issued if:

- Show good and sufficient cause
- Exceptional hardship to the applicant must be shown
- Emphasize (3)(iii)
- Minimum necessary

Physical handicaps do not justify the need for a Variance.

of insurance coverage and (ii) such construction below the base flood level increases risks to life and property. Such notification shall be maintained with a record of all variance actions as required in paragraph (a)(6) of this section; and

(6) A community shall (i) maintain a record of all variance actions, including justification for their issuance, and (ii) report such variances issued in its annual or biennial report submitted to the Administrator.

(7) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria of paragraphs (a)(1) through (a)(4) of this section are met, and (ii) the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(b)(1) The requirement that each flood-prone, mudslide (i.e., mudflow)-prone, and flood-related erosion prone community must adopt and submit adequate flood plain management regulations as a condition of initial and continued flood insurance eligibility is statutory and cannot be waived, and such regulations shall be adopted by a community within the time periods specified in Sec. 60.3, 60.4 or Sec. 60.5. However, certain exceptions from the standards contained in this subpart may be permitted where the Administrator recognizes that, because of extraordinary circumstances, local conditions may render the application of certain standards the cause for severe hardship and gross inequity for a particular community. Consequently, a community proposing the adoption of flood plain management regulations which vary from the standards set forth in Sec. 60.3, 60.4, or Sec. 60.5, shall explain in writing to the Administrator the nature and extent of and the reasons for the exception request and shall include sufficient supporting economic, environmental, topographic, hydrologic, and other scientific and technical data, and data with respect to the impact on public safety and the environment.

(2) The Administrator shall prepare a Special Environmental Clearance to determine whether the proposal for an exception under paragraph (b)(1) of this section will have significant impact on the human environment. The decision whether an Environmental Impact Statement or other environmental document will be prepared, will be made in accordance with the procedures set out in 44 CFR part 10. Ninety or more days may be required for an environmental quality clearance if the proposed exception will have significant impact on the human environment thereby requiring an EIS.

(c) A community may propose flood plain management measures which adopt standards for floodproofed residential basements below the base flood level in zones A1-30, AH, AO, and AE which are not subject to tidal flooding. Notwithstanding the requirements of paragraph (b) of

The community should document every aspect of the variance granted. It should also completely document why a variance was *not* allowed.

## Document:

- Application
- Correspondence
- Meeting minutes
- Phone calls
- Verbal discussions

## Exceptions to NFIP Standards

## Environmental requirements for Exceptions

Residential basements are allowed if ...

this section the Administrator may approve the proposal provided that:

(1) The community has demonstrated that areas of special flood hazard in which basements will be permitted are subject to shallow and low velocity flooding and that there is adequate flood warning time to ensure that all residents are notified of impending floods. For the purposes of this paragraph flood characteristics must include:

(i) Flood depths that are five feet or less for developable lots that are contiguous to land above the base flood level and three feet or less for other lots;

(ii) Flood velocities that are five feet per second or less; and

(iii) Flood warning times that are 12 hours or greater. Flood warning times of two hours or greater may be approved if the community demonstrates that it has a flood warning system and emergency plan in operation that is adequate to ensure safe evacuation of flood plain residents.

(2) The community has adopted flood plain management measures that require that new construction and substantial improvements of residential structures with basements in zones A1-30, AH, AO, and AE shall:

(i) Be designed and built so that any basement area, together with attendant utilities and sanitary facilities below the floodproofed design level, is watertight with walls that are impermeable to the passage of water without human intervention. Basement walls shall be built with the capacity to resist hydrostatic and hydrodynamic loads and the effects of buoyancy resulting from flooding to the floodproofed design level, and shall be designed so that minimal damage will occur from floods that exceed that level. The floodproofed design level shall be an elevation one foot above the level of the base flood where the difference between the base flood and the 500-year flood is three feet or less and two feet above the level of the base flood where the difference is greater than three feet.

(ii) Have the top of the floor of any basement area no lower than five feet below the elevation of the base flood;

(iii) Have the area surrounding the structure on all sides filled to or above the elevation of the base flood. Fill must be compacted with slopes protected by vegetative cover;

(iv) Have a registered professional engineer or architect develop or review the building's structural design, specifications, and plans, including consideration of the depth, velocity, and duration of flooding and type and permeability of soils at the building site, and certify that the basement design and methods of construction proposed are in accordance with accepted standards of practice for meeting the provisions of this paragraph; are verifiable.



## VARIANCES

60.6

(v) Be inspected by the building inspector or other authorized representative of the community to verify that the structure is built according to its design and those provisions of this section which	
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<p>Subpart C--Additional Considerations in Managing Flood-Prone, Mudslide (i.e., Mudflow)-Prone and Flood-Related Erosion-Prone Areas</p> <p>Sec. 60.21 Purpose of this subpart.</p> <p>The purpose of this subpart is to encourage the formation and adoption of overall comprehensive management plans for flood-prone, mudslide (i.e., mudflow)-prone and flood-related erosion-prone areas. While adoption by a community of the standards in this subpart is not mandatory, the community shall completely evaluate these standards.</p> <p>Sec. 60.22 Planning considerations for flood-prone areas.</p> <p>(a) The flood plain management regulations adopted by a community for flood-prone areas should:</p> <ol style="list-style-type: none"> <li>(1) Permit only that development of flood-prone areas which (i) is appropriate in light of the probability of flood damage and the need to reduce flood losses, (ii) is an acceptable social and economic use of the land in relation to the hazards involved, and (iii) does not increase the danger to human life;</li> <li>(2) Prohibit nonessential or improper installation of public utilities and public facilities in flood-prone areas.</li> </ol> <p>(b) In formulating community development goals after the occurrence of a flood disaster, each community shall consider--</p> <ol style="list-style-type: none"> <li>(1) Preservation of the flood-prone areas for open space purposes;</li> <li>(2) Relocation of occupants away from flood-prone areas;</li> <li>(3) Acquisition of land or land development rights for public purposes consistent with a policy of minimization of future property losses;</li> <li>(4) Acquisition of frequently flood-damaged structures;</li> </ol> <p>(c) In formulating community development goals and in adopting flood plain management regulations, each community shall consider at least the following factors--</p> <ol style="list-style-type: none"> <li>(1) Human safety;</li> <li>(2) Diversion of development to areas safe from flooding in light of the need to reduce flood damages and in light of the need to prevent environmentally incompatible flood plain use;</li> <li>(3) Full disclosure to all prospective and interested parties (including but not limited to purchasers and renters) that (i) certain structures are located within flood-prone areas, (ii) variances have been granted for certain structures located within flood-prone areas, and (iii) premium rates applied to new structures built at elevations below the base flood substantially increase as the elevation decreases;</li> <li>(4) Adverse effects of flood plain development on existing development;</li> </ol>	<p>MANAGEMENT CONSIDERATIONS</p> <p>Adoption is not mandatory but the community shall completely evaluate the standards of Sec 60.22.</p> <p>Planning Considerations</p> <p>Higher Standards</p>
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- (5) Encouragement of floodproofing to reduce flood damage;
- (6) Flood warning and emergency preparedness plans;
- (7) Provision for alternative vehicular access and escape routes when normal routes are blocked or destroyed by flooding;
- (8) Establishment of minimum floodproofing and access requirements for schools, hospitals, nursing homes, orphanages, penal institutions, fire stations, police stations, communications centers, water and sewage pumping stations, and other public or quasi-public facilities already located in the flood-prone area, to enable them to withstand flood damage, and to facilitate emergency operations;
- (9) Improvement of local drainage to control increased runoff that might increase the danger of flooding to other properties;
- (10) Coordination of plans with neighboring community's flood plain management programs;
- (11) The requirement that all new construction and substantial improvements in areas subject to subsidence be elevated above the base flood level equal to expected subsidence for at least a ten year period;
- (12) For riverine areas, requiring subdividers to furnish delineations for floodways before approving a subdivision;
- (13) Prohibition of any alteration or relocation of a watercourse, except as part of an overall drainage basin plan. In the event of an overall drainage basin plan, provide that the flood carrying capacity within the altered or relocated portion of the watercourse is maintained;
- (14) Requirement of setbacks for new construction within Zones V1-30, VE, and V on a community's FIRM;
- (15) Requirement of additional elevation above the base flood level for all new construction and substantial improvements within Zones A1-30, AE, V1-30, and VE on the community's FIRM to protect against such occurrences as wave wash and floating debris, to provide an added margin of safety against floods having a magnitude greater than the base flood, or to compensate for future urban development;
- (16) Requirement of consistency between state, regional and local comprehensive plans and flood plain management programs;
- (17) Requirement of pilings or columns rather than fill, for the elevation of structures within flood-prone areas, in order to maintain the storage capacity of the flood plain and to minimize the potential for negative impacts to sensitive ecological areas;
- (18) Prohibition, within any floodway or coastal high hazard area, of plants or facilities in which hazardous substances are manufactured.
- (19) Requirement that a plan for evacuating residents of all manufactured home parks or subdivisions located within flood prone areas be developed and filed with and approved by appropriate community emergency management authorities.

Sec. 60.25 Designation, duties, and responsibilities of State Coordinating Agencies.

STATE  
COORDINATING  
AGENCIES

(a) States are encouraged to demonstrate a commitment to the minimum flood plain management criteria set forth in Sec. 60.3, 60.4, and 60.5 as evidenced by the designation of an agency of State government to be responsible for coordinating the Program aspects of flood plain management in the State.

(b) State participation in furthering the objectives of this part shall include maintaining capability to perform the appropriate duties and responsibilities as follows:

(1) Enact, whenever necessary, legislation enabling counties and municipalities to regulate development within flood-prone areas;

(2) Encourage and assist communities in qualifying for participation in the Program;

(3) Guide and assist county and municipal public bodies and agencies in developing, implementing, and maintaining local flood plain management regulations;

(4) Provide local governments and the general public with Program information on the coordination of local activities with Federal and State requirements for managing flood-prone areas;

(5) Assist communities in disseminating information on minimum elevation requirements for development within flood-prone areas;

(6) Assist in the delineation of riverine and coastal flood-prone areas, whenever possible, and provide all relevant technical information to the Administrator;

(7) Recommend priorities for Federal flood plain management activities in relation to the needs of county and municipal localities within the State;

(8) Provide notification to the Administrator in the event of apparent irreconcilable differences between a community's local flood plain management program and the minimum requirements of the Program;

(9) Establish minimum State flood plain management regulatory standards consistent with those established in this part and in conformance with other Federal and State environmental and water pollution standards for the prevention of pollution during periods of flooding;

(10) Assure coordination and consistency of flood plain management activities with other State, areawide, and local planning and enforcement agencies;

(11) Assist in the identification and implementation of flood hazard mitigation recommendations which are consistent with the minimum flood plain management criteria for the Program;

<p>(12) Participate in flood plain management training opportunities and other flood hazard preparedness programs whenever practicable.</p> <p>(c) Other duties and responsibilities, which may be deemed appropriate by the State and which are to be officially designated as being conducted in the capacity of the State Coordinating Agency for the Program, may be carried out with prior notification of the Administrator.</p> <p>(d) For States which have demonstrated a commitment to and experience in application of the minimum flood plain management criteria set forth in Sec. 60.3, 60.4, and 60.5 as evidenced by the establishment and implementation of programs which substantially encompass the activities described in paragraphs (a), (b), and (c) of this section, the Administrator shall take the foregoing into account when:</p> <p>(1) Considering State recommendations prior to implementing Program activities affecting State communities;</p> <p>(2) Considering State approval or certifications of local flood plain management regulations as meeting the requirements of this part.</p> <p>Sec. 60.26 Local coordination.</p> <p>(a) Local flood plain, mudslide (i.e., mudflow) and flood-related erosion area management, forecasting, emergency preparedness, and damage abatement programs should be coordinated with relevant Federal, State, and regional programs;</p> <p>(b) A community adopting flood plain management regulations pursuant to these criteria should coordinate with the appropriate State agency to promote public acceptance and use of effective flood plain, mudslide, (i.e., mudflow) and flood-related erosion regulations;</p> <p>(c) A community should notify adjacent communities prior to substantial commercial developments and large subdivisions to be undertaken in areas having special flood, mudslide (i.e., mudflow) and/or flood-related erosion hazards.</p>	<p>LOCAL COORDINATION</p>
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<p>Sec. 62.5 Premium refund.</p> <p>A Standard Flood Insurance Policyholder whose property has been determined not to be in a special hazard area after the map revision or a Letter of Map Amendment under part 70 of this subchapter may cancel the policy within the current policy year provided (a) he was required to purchase or to maintain flood insurance coverage, or both, as a condition for financial assistance, and (b) his property was located in an identified special hazard area as represented on an effective FHBM or FIRM when the financial assistance was provided. If no claim under the policy has been paid or is pending, the full premium shall be refunded for the current policy year, and for an additional policy year where the insured had been required to renew the policy during the period when a revised map was being reprinted. A Standard Flood Insurance Policyholder may cancel a policy having a term of three (3) years, on an anniversary date, where the reason for the cancellation is that a policy of flood insurance has been obtained or is being obtained in substitution for the NFIP policy and the NFIP obtains a written concurrence in the cancellation from any mortgage of which the NFIP has actual notice; or the policyholder has extinguishing the insured mortgage debt and is no longer required by the mortgagee to maintain the coverage. In such event, the premium refund shall be pro rata but with retention of the expense constant.</p>	<p><b>PREMIUM REFUND</b></p> <p>Flood Insurance Premium Refund after a map revision or LOMA</p>
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## Sec. 64.3 Flood Insurance Maps.

(a) The following maps may be prepared by the Administrator for use in connection with the sale of flood insurance:

(1) Flood Insurance Rate Map: This map is prepared after the flood hazard study for the community has been completed and the risk premium rates have been established. The FIRM indicates the risk premium rate zones applicable in the community and when those rates are effective. The FIRM also may indicate, at the request of the community, zones to identify areas of future-conditions flood hazards. The symbols used to designate the risk premium rate zones and future-conditions zones are as follows:

Zone symbol	
A.....	Area of special flood hazard without water surface elevations determined
A1-30, AE.....	Area of special flood hazard with water surface elevations determined
A0.....	Area of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) ft
A99.....	Area of special flood hazard where enough progress has been made on a protective system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes
AH.....	Areas of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) feet, and with water surface elevations determined
AR.....	Area of special flood hazard that results from the decertification of a previously accredited flood protection system that is

MAPS

FIRM

Map Zones and Symbols

	determined to be in the process of being restored to provide base flood protection	
V.....	Area of special flood hazards without water surface elevations determined, and with velocity, that is inundated by tidal floods (coastal high hazard area)	
V1-30, VE.....	Area of special flood hazards, with water surface elevations determined and with velocity, that is inundated by tidal floods (coastal high hazard area)	
V0.....	Area of special flood hazards having shallow water depths and/or unpredictable flow paths between (1) and (3) ft. and with velocity	
B, X.....	Areas of moderate flood hazards or areas of future-conditions flood hazard.	
C, X.....	Area of minimal hazards	
D.....	Area of undetermined but possible, flood hazards	
M.....	Area of special mudslide (i.e., mudflow) hazards	
N.....	Area of moderate mudslide (i.e., mudflow) hazards	
P.....	Area of undetermined, but possible, mudslide hazards	
E.....	Area of special flood-related erosion hazards.	
<hr/>		
Areas identified as subject to more than one hazard (flood, mudslide (i.e., mudflow), flood-related erosion) or potential hazard (i.e., future-conditions flooding) will be designated on the FIRM by use of the proper zone symbols in combination.		
(2) Flood Hazard Boundary Map (FHBM). This map is issued by the Administrator delineating Zones A, M, and E within a community.		
(b) Notice of the issuance of new or revised FHBMs or FIRMs is given in Part 65 of this subchapter. The mandatory purchase of insurance is required within designated Zones A, A1-30, AE, A99, AO,		
		FHBM



## MAP AND ZONE DESCRIPTIONS

64.3

AH, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, V1-30, VE, V, VO, M, and E.

(c) The FHBM or FIRM shall be maintained for public inspection at the following locations:

(1) The information office of the State agency or agencies designated by statute or the respective Governors to cooperate with the Administrator in implementing the Program whenever a community becomes eligible for Program participation and the sale of insurance pursuant to this section or is identified as flood prone.

(2) One or more official locations within the community in which flood insurance is offered.

(3) [Reserved]

(4) The official record copy of each official map shall be maintained in FEMA files in Washington, DC.

Maps to be maintained for public inspection

Sec. 64.4 Effect on community eligibility resulting from boundary changes, governmental reorganization, etc.

(a) When a community not participating in the Program acquires by means of annexation, incorporation, or otherwise, an area within another community participating in the Program, no new flood insurance shall be made available as of the effective date of annexation until the newly acquiring community participates in the Program. Until the effective date of participation, existing flood insurance policies remain in effect until the policy's date of expiration, but shall not be renewed.

(b) When a community participating in the Program acquires by means of annexation, incorporation, or otherwise, another area which was previously located in a community either participating or not participating in the Program, the community shall have six months from the date of acquisition to formally amend its flood plain management regulations in order to include all flood-prone areas within the newly acquired area. The amended regulations shall satisfy the applicable requirements in Sec. 60.3 of this subchapter based on the data previously provided by the Administrator. In the event that the newly acquired area was previously located in a community participating in the Program, the provisions of this section shall only apply if the community, upon acquisition, and pending formal adoption of the amendment to its flood plain management regulations, certifies in writing over the signature of a community official that within the newly acquired area the flood plain management requirements previously applicable in the area remain in force. In the event that the newly-acquired area was previously located in a community not participating in the Program, the provisions of the section shall only apply if the community, upon acquisition, and pending formal adoption of the amendments to its flood plain management regulations, certifies in writing over the signature of a community official that it shall enforce within the newly-month period, existing flood insurance policies shall remain in effect until their date of expiration may be renewed, and new policies may be issued. Failure to satisfy the applicable requirements in Sec. 60.3 shall result in the community's suspension from Program participation pursuant to Sec. 59.24 of this subchapter.

(c) When an area previously a part of a community participating in the Program becomes autonomous or becomes a portion of a newly autonomous community resulting from boundary changes, governmental reorganization, changes in state statutes or constitution, or otherwise, such new community shall be given six months from the date of its independence, to adopt flood plain management regulations within the special hazard areas subject to its jurisdiction and to submit its application for participation as a separate community in order to retain eligibility for the sale of flood insurance. The regulations adopted by such new community shall satisfy the applicable requirements in Sec. 60.3 of this subchapter based on the data previously provided by the

## BOUNDARY CHANGES

If a non-participating community annexes an area of a participating community into its own jurisdiction, flood insurance policies from the former jurisdiction will not be renewed.

## BOUNDARY CHANGES

64.4

Administrator. The provisions of this section shall only apply where the new community upon the date of its independence certifies in writing over the signature of a community official that, pending formal adoption of flood plain management regulations, the flood plain management requirements previously applicable in that area remain in effect. During the six month period, existing flood insurance policies shall remain in effect until their dates of expiration may be renewed, and new policies may be issued. Failure to satisfy the applicable requirements in Sec. 60.3 of this subchapter shall result in the community's suspension from Program participation pursuant to Sec. 59.24 of this subchapter.

(d) Where any community or any area within a community had in effect a FHBM or FIRM, but all or a portion of that community has been acquired by another community, or becomes autonomous, that map shall remain in effect until it is superseded by the Administrator, whether by republication as part of the map of the acquiring community, or otherwise.

(e) When a community described in paragraph (a), (b), (c), or (d) of this section has flood elevations in effect, no new appeal period under parts 66, 67, and 68 of this subchapter will begin except as new scientific and technical data are available.

# GENERAL MAP CHANGE PROCEDURES

65.1-65-4

## Sec. 65.1 Purpose of part.

42 U.S.C. 4104 authorizes the Director to identify and publish information with respect to all areas within the United States having special flood, mudslide (i.e., mudflow) and flood-related erosion hazards. The purpose of this part is to outline the steps a community needs to take in order to assist the Agency's effort in providing up-to-date identification and publication, in the form of the maps described in part 64, on special flood, mudslide (i.e., mudflow) and flood-related erosion hazards.

## Sec. 65.2 Definitions.

(a) Except as otherwise provided in this part, the definitions set forth in part 59 of this subchapter are applicable to this part.

(b) For the purpose of this part, a certification by a registered professional engineer or other party does not constitute a warranty or guarantee of performance, expressed or implied. Certification of data is a statement that the data is accurate to the best of the certifier's knowledge. Certification of analyses is a statement that the analyses have been performed correctly and in accordance with sound engineering practices. Certification of structural works is a statement that the works are designed in accordance with sound engineering practices to provide protection from the base flood. Certification of "as built" conditions is a statement that the structure(s) has been built according to the plans being certified, is in place, and is fully functioning.

(c) For the purposes of this part, "reasonably safe from flooding" means base flood waters will not inundate the land or damage structures to be removed from the SFHA and that any subsurface waters related to the base flood will not damage existing or proposed buildings.

Important note about "certification" – specifically, regarding "reasonably safe from flooding".

Definition: "reasonably safe from flooding"

Reference TB 10

## Sec. 65.3 Requirement to submit new technical data.

A community's base flood elevations may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, a community shall notify the Administrator of the changes by submitting technical or scientific data in accordance with this part. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and flood plain management requirements will be based upon current data.

BFE changes (up or down) must be reported to FEMA no later than 6 months after the changes become known.

There is some interpretation involved here but most authorities would say this submission to FEMA should be a LOMR.

## Sec. 65.4 Right to submit new technical data.

(a) A community has a right to request changes to any of the information shown on an effective map that does not impact flood plain or floodway delineations or base flood elevations, such as community boundary changes, labeling, or planimetric details. Such a submission

Right to submit new technical data for

## GENERAL MAP CHANGE PROCEDURES

65.1-65-4

shall include appropriate supporting documentation in accordance with this part and may be submitted at any time.

(b) All requests for changes to effective maps, other than those initiated by FEMA, must be made in writing by the Chief Executive Officer of the community (CEO) or an official designated by the CEO. Should the CEO refuse to submit such a request on behalf of another party, FEMA will agree to review it only if written evidence is provided indicating the CEO or designee has been requested to do so.

(c) Requests for changes to effective Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs) are subject to the cost recovery procedures described in 44 CFR part 72. As indicated in part 72, revisions requested to correct mapping errors or errors in the Flood Insurance Study analysis are not to be subject to the cost-recovery procedures.

boundary changes,  
labeling, or planimetric  
details

Sec. 65.5 Revision to special hazard area boundaries with no change to base flood elevation determinations.

(a) Data requirements for topographic changes. In many areas of special flood hazard (excluding V zones and floodways) it may be feasible to elevate areas with engineered earthen fill above the base flood elevation. Scientific and technical information to support a request to gain exclusion from an area of special flood hazard of a structure or parcel of land that has been elevated by the placement of engineered earthen fill will include the following:

(1) A copy of the recorded deed indicating the legal description of the property and the official recordation information (deed book volume and page number) and bearing the seal of the appropriate recordation official (e.g., County Clerk or Recorder of Deeds).

(2) If the property is recorded on a plat map, a copy of the recorded plat indicating both the location of the property and the official recordation information (plat book volume and page number) and bearing the seal of the appropriate recordation official. If the property is not recorded on a plat map, FEMA requires copies of the tax map or other suitable maps to help in locating the property accurately.

(3) A topographic map or other information indicating existing ground elevations and the date of fill. FEMA's determination to exclude a legally defined parcel of land or a structure from the area of special flood hazard will be based upon a comparison of the base flood elevations to the lowest ground elevation of the parcel or the lowest adjacent grade to the structure. If the lowest ground elevation of the entire legally defined parcel of land or the lowest adjacent grade to the structure are at or above the elevations of the base flood, FEMA will exclude the parcel and/or structure from the area of special flood hazard.

(4) Written assurance by the participating community that they have complied with the appropriate minimum floodplain management requirements under Sec. 60.3. This includes the requirements that:

(i) Existing residential structures built in the SFHA have their lowest floor elevated to or above the base flood;

(ii) The participating community has determined that the land and any existing or proposed structures to be removed from the SFHA are "reasonably safe from flooding", and that they have on file, available upon request by FEMA, all supporting analyses and documentation used to make that determination;

(iii) The participating community has issued permits for all existing and proposed construction or other development; and

(iv) All necessary permits have been received from those governmental agencies where approval is required by Federal, State, or local law.

(5) If the community cannot assure that it has complied with the appropriate minimum floodplain management requirements under Sec. 60.3, of this chapter, the map revision request will be deferred until the community remedies all violations to the maximum extent possible

Map changes with no change in BFE

LOMR-F requirements

Reference: TB 10

See Endnote #3:

Property ID

Removal by LOMR-F dependent by comparing the BFE to:

- For a parcel: the lowest ground elevation
- For structure: the lowest adjacent grade

Community's written assurance that 60.3 provisions have been met

Community must certify that the development will be "reasonably safe from flooding"

Reference: TB 10

## MAP CHANGE WITH NO CHANGE IN BFE

65.5

through coordination with FEMA. Once the remedies are in place, and the community assures that the land and structures are "reasonably safe from flooding," we will process a revision to the SFHA using the criteria set forth in Sec. 65.5(a). The community must maintain on file, and make available upon request by FEMA, all supporting analyses and documentation used in determining that the land or structures are "reasonably safe from flooding."

(6) Data to substantiate the base flood elevation. If we complete a Flood Insurance Study (FIS), we will use those data to substantiate the base flood elevation. Otherwise, the community may submit data provided by an authoritative source, such as the U.S. Army Corps of Engineers, U.S. Geological Survey, Natural Resources Conservation Service, State and local water resource departments, or technical data prepared and certified by a registered professional engineer. If base flood elevations have not previously been established, we may also request hydrologic and hydraulic calculations.

(7) A revision of floodplain delineations based on fill must demonstrate that any such fill does not result in a floodway encroachment.

(b) New topographic data. A community may also follow the procedures described in paragraphs (a)(1) through (6) of this section to request a map revision when no physical changes have occurred in the area of special flood hazard, when no fill has been placed, and when the natural ground elevations are at or above the elevations of the base flood, where new topographic maps are more detailed or more accurate than the current map.

(c) Certification requirements. A registered professional engineer or licensed land surveyor must certify the items required in paragraphs (a)(3) and (6) and (b) of this section. Such certifications are subject to the provisions under Sec. 65.2.

(d) Submission procedures. Submit all requests to the appropriate address serving the community's geographic area or to the FEMA Headquarters Office in Washington, DC.

Fill not allowed to encroach into floodway

New topographic data

Certification requirements for engineers and surveyors

<p>Sec. 65.6 Revision of base flood elevation determinations.</p> <p>(a) General conditions and data requirements.</p> <p>(1) The supporting data must include all the information FEMA needs to review and evaluate the request. This may involve the requestor's performing new hydrologic and hydraulic analysis and delineation of new flood plain boundaries and floodways, as necessary.</p> <p>(2) To avoid discontinuities between the revised and unrevised flood data, the necessary hydrologic and hydraulic analyses submitted by the map revision requestor must be extensive enough to ensure that a logical transition can be shown between the revised flood elevations, flood plain boundaries, and floodways and those developed previously for areas not affected by the revision. Unless it is demonstrated that it would not be appropriate, the revised and unrevised base flood elevations must match within one-half foot where such transitions occur.</p> <p>(3) Revisions cannot be made based on the effects of proposed projects or future conditions. Section 65.8 of this subchapter contains provisions for obtaining conditional approval of proposed projects that may effect map changes when they are completed.</p> <p>(4) The datum and date of releveling of benchmarks, if any, to which the elevations are referenced must be indicated.</p> <p>(5) Maps will not be revised when discharges change as a result of the use of an alternative methodology or data for computing flood discharges unless the change is statistically significant as measured by a confidence limits analysis of the new discharge estimates.</p> <p>(6) Any computer program used to perform hydrologic or hydraulic analyses in support of a flood insurance map revision must meet all of the following criteria:</p> <p>(i) It must have been reviewed and accepted by a governmental agency responsible for the implementation of programs for flood control and/or the regulation of flood plain lands. For computer programs adopted by non-Federal agencies, certification by a responsible agency official must be provided which states that the program has been reviewed, tested, and accepted by that agency for purposes of design of flood control structures or flood plain land use regulation.</p> <p>(ii) It must be well-documented including source codes and user's manuals.</p> <p>(iii) It must be available to FEMA and all present and future parties impacted by flood insurance mapping developed or amended through the use of the program. For programs not generally available from a Federal agency, the source code and user's manuals must be sent to FEMA free of charge, with fully-documented permission from the owner that FEMA may release the code and user's manuals to such impacted parties.</p> <p>(7) A revised hydrologic analysis for flooding sources with established base flood elevations must include evaluation of the same</p>	<p>Revision of BFEs</p> <p>See ENDNOTE #4:</p> <p>BFE revisions cannot be made based on future conditions</p> <p>Computer program requirements for engineering studies</p>
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recurrence interval(s) studied in the effective FIS, such as the 10-, 50-, 100-, and 500-year flood discharges.

(8) A revised hydraulic analysis for a flooding source with established base flood elevations must include evaluation of the same recurrence interval(s) studied in the effective FIS, such as the 10-, 50-, 100-, and 500-year flood elevations, and of the floodway. Unless the basis of the request is the use of an alternative hydraulic methodology or the requestor can demonstrate that the data of the original hydraulic computer model is unavailable or its use is inappropriate, the analysis shall be made using the same hydraulic computer model used to develop the base flood elevations shown on the effective Flood Insurance Rate Map and updated to show present conditions in the flood plain. Copies of the input and output data from the original and revised hydraulic analyses shall be submitted.

(9) A hydrologic or hydraulic analysis for a flooding source without established base flood elevations may be performed for only the 100-year flood.

(10) A revision of flood plain delineations based on topographic changes must demonstrate that any topographic changes have not resulted in a floodway encroachment.

(11) Delineations of flood plain boundaries for a flooding source with established base flood elevations must provide both the 100- and 500-year flood plain boundaries. For flooding sources without established base flood elevations, only 100-year flood plain boundaries need be submitted. These boundaries should be shown on a topographic map of suitable scale and contour interval.

(12) If a community or other party seeks recognition from FEMA, on its FHBM or FIRM, that an altered or relocated portion of a watercourse provides protection from, or mitigates potential hazards of, the base flood, the Administrator may request specific documentation from the community certifying that, and describing how, the provisions of Sec. 60.3(b)(7) of this subchapter will be met for the particular watercourse involved. This documentation, which may be in the form of a written statement from the Community Chief Executive Officer, an ordinance, or other legislative action, shall describe the nature of the maintenance activities to be performed, the frequency with which they will be performed, and the title of the local community official who will be responsible for assuring that the maintenance activities are accomplished.

(13) Notwithstanding any other provisions of Sec. 65.6, a community may submit, in lieu of the documentation specified in Sec. 65.6(a)(12), certification by a registered professional engineer that the project has been designed to retain its flood carrying capacity without periodic maintenance.

(14) The participating community must provide written assurance that they have complied with the appropriate minimum floodplain management requirements under Sec. 60.3 of this chapter

Revisions must also evaluate 10-, 50-, 100-, and 500- year flood discharges

Only 100-year discharge is required where no BFEs existed previously

Must demonstrate no floodway encroachment

This includes the requirements that:

- (i) Existing residential structures built in the SFHA have their lowest floor elevated to or above the base flood;
- (ii) The participating community has determined that the land and any existing or proposed structures to be removed from the SFHA are "reasonably safe from flooding," and that they have on file, available upon request by FEMA, all supporting analyses and documentation used to make that determination;

(iii) The participating community has issued permits for all existing and proposed construction or other development; and

(iv) All necessary permits have been received from those governmental agencies where approval is required by Federal, State, or local law.

(15) If the community cannot assure that it has complied with the appropriate minimum floodplain management requirements under Sec. 60.3, of this chapter the map revision request will be deferred until the community remedies all violations to the maximum extent possible through coordination with FEMA. Once the remedies are in place, and the community assures that the land and structures are "reasonably safe from flooding," we will process a revision to the SFHA using the criteria set forth under Sec. 65.6. The community must maintain on file, and make available upon request by FEMA, all supporting analyses and documentation used in determining that the land or structures are "reasonably safe from flooding."

(b) Data requirements for correcting map errors. To correct errors in the original flood analysis, technical data submissions shall include the following:

(1) Data identifying mathematical errors.

(2) Data identifying measurement errors and providing correct measurements.

(c) Data requirements for changed physical conditions. Revisions based on the effects of physical changes that have occurred in the flood plain shall include:

(1) Changes affecting hydrologic conditions. The following data must be submitted:

(i) General description of the changes (e.g., dam, diversion channel, or detention basin).

(ii) Construction plans for as-built conditions, if applicable.

(iii) New hydrologic analysis accounting for the effects of the changes.

(iv) New hydraulic analysis and profiles using the new flood discharge values resulting from the hydrologic analysis.

(v) Revised delineations of the flood plain boundaries and floodway.

Community certification requirements:

- Lowest floor elevated to or above BFE
- Reasonably safe from flooding
- All documentation available for review
- Permits for all required development issued
- All permits from other government agencies on hand as appropriate

LOMR-F will not be issued until:

- All violations are corrected to the maximum extent possible, and
- The community must certify that the development is reasonably safe from flooding

<p>(2) Changes affecting hydraulic conditions. The following data shall be submitted:</p> <ul style="list-style-type: none"> <li>(i) General description of the changes (e.g., channelization or new bridge, culvert, or levee).</li> <li>(ii) Construction plans for as-built conditions.</li> <li>(iii) New hydraulic analysis and flood elevation profiles accounting for the effects of the changes and using the original flood discharge values upon which the original map is based.</li> <li>(iv) Revised delineations of the flood plain boundaries and floodway.</li> </ul> <p>(3) Changes involving topographic conditions. The following data shall be submitted:</p> <ul style="list-style-type: none"> <li>(i) General description of the changes (e.g., grading or filling).</li> <li>(ii) New topographic information, such as spot elevations, cross sections grading plans, or contour maps.</li> <li>(iii) Revised delineations of the flood plain boundaries and, if necessary, floodway.</li> </ul> <p>(d) Data requirements for incorporating improved data. Requests for revisions based on the use of improved hydrologic, hydraulic, or topographic data shall include the following data:</p> <ul style="list-style-type: none"> <li>(1) Data that are believed to be better than those used in the original analysis (such as additional years of stream gage data).</li> <li>(2) Documentation of the source of the data.</li> <li>(3) Explanation as to why the use of the new data will improve the results of the original analysis.</li> <li>(4) Revised hydrologic analysis where hydrologic data are being incorporated.</li> <li>(5) Revised hydraulic analysis and flood elevation profiles where new hydrologic or hydraulic data are being incorporated.</li> <li>(6) Revised delineations of the flood plain boundaries and floodway where new hydrologic, hydraulic, or topographic data are being incorporated.</li> </ul> <p>(e) Data requirements for incorporating improved methods. Requests for revisions based on the use of improved hydrologic or hydraulic methodology shall include the following data:</p> <ul style="list-style-type: none"> <li>(1) New hydrologic analysis when an alternative hydrologic methodology is being proposed.</li> <li>(2) New hydraulic analysis and flood elevation profiles when an alternative hydrologic or hydraulic methodology is being proposed.</li> <li>(3) Explanation as to why the alternative methodologies are superior to the original methodologies.</li> <li>(4) Revised delineations of the flood plain boundaries and floodway based on the new analysis(es).</li> </ul> <p>(f) Certification requirements. All analysis and data submitted by the requester shall be certified by a registered professional engineer or</p>	<p>Submitter certification requirements</p>
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<p>licensed land surveyor, as appropriate, subject to the definition of "certification" given at Sec. 65.2 of this subchapter.</p> <p>(g) Submission procedures. All requests shall be submitted to the FEMA Regional Office servicing the community's geographic area or to the FEMA Headquarters Office in Washington, DC, and shall be accompanied by the appropriate payment, in accordance with 44 CFR part 72.</p> <p>Sec. 65.7 Floodway revisions.</p> <p>(a) General. Floodway data is developed as part of FEMA Flood Insurance Studies and is utilized by communities to select and adopt floodways as part of the flood plain management program required by Sec. 60.3 of this subchapter. When it has been determined by a community that no practicable alternatives exist to revising the boundaries of its previously adopted floodway, the procedures below shall be followed.</p> <p>(b) Data requirements when base flood elevation changes are requested. When a floodway revision is requested in association with a change to base flood elevations, the data requirements of Sec. 65.6 shall also be applicable. In addition, the following documentation shall be submitted:</p> <p>(1) Copy of a public notice distributed by the community stating the community's intent to revise the floodway or a statement by the community that it has notified all affected property owners and affected adjacent jurisdictions.</p> <p>(2) Copy of a letter notifying the appropriate State agency of the floodway revision when the State has jurisdiction over the floodway or its adoption by communities participating in the NFIP.</p> <p>(3) Documentation of the approval of the revised floodway by the appropriate State agency (for communities where the State has jurisdiction over the floodway or its adoption by communities participating in the NFIP).</p> <p>(4) Engineering analysis for the revised floodway, as described below:</p> <p>(i) The floodway analysis must be performed using the hydraulic computer model used to determine the proposed base flood elevations.</p> <p>(ii) The floodway limits must be set so that neither the effective base flood elevations nor the proposed base flood elevations if less than the effective base flood elevations, are increased by more than the amount specified under Sec. 60.3 (d)(2). Copies of the input and output data from the original and modified computer models must be submitted.</p> <p>(5) Delineation of the revised floodway on the same topographic map used for the delineation of the revised flood boundaries.</p> <p>(c) Data requirements for changes not associated with base flood</p>	<p>Submission requirements</p> <p>Do not make submissions to the FEMA Regional Office. Old reference.</p> <p>Floodway Revisions</p> <p>Reference ENDNOTE #4</p> <ul style="list-style-type: none"> <li>• Are there any practical alternatives?</li> <li>• Use 65.6 provisions if BFE changes occur</li> <li>• Public Notice or formal notification of affected property owners of proposed changes</li> <li>• Copy of notification of State NFIP Agency</li> <li>• Documentation of approval</li> </ul> <p>Engineering analysis requirements</p>
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elevation changes. The following data shall be submitted:

(1) Items described in paragraphs (b) (1) through (3) of this section must be submitted.

(2) Engineering analysis for the revised floodway, as described below:

(i) The original hydraulic computer model used to develop the established base flood elevations must be modified to include all encroachments that have occurred in the flood plain since the existing floodway was developed. If the original hydraulic computer model is not available, an alternate hydraulic computer model may be used provided the alternate model has been calibrated so as to reproduce the original water surface profile of the original hydraulic computer model. The alternate model must be then modified to include all encroachments that have occurred since the existing floodway was developed.

(ii) The floodway analysis must be performed with the modified computer model using the desired floodway limits.

(iii) The floodway limits must be set so that combined effects of the past encroachments and the new floodway limits do not increase the effective base flood elevations by more than the amount specified in Sec. 60.3(d)(2). Copies of the input and output data from the original and modified computer models must be submitted.

(3) Delineation of the revised floodway on a copy of the effective NFIP map and a suitable topographic map.

(d) Certification requirements. All analyses submitted shall be certified by a registered professional engineer. All topographic data shall be certified by a registered professional engineer or licensed land surveyor. Certifications are subject to the definition given at Sec. 65.2 of this subchapter.

(e) Submission procedures. All requests that involve changes to floodways shall be submitted to the appropriate FEMA Regional Office servicing the community's geographic area.

Sec. 65.8 Review of proposed projects.

A community, or an individual through the community, may request FEMA's comments on whether a proposed project, if built as proposed, would justify a map revision. FEMA's comments will be issued in the form of a letter, termed a Conditional Letter of Map Revision, in accordance with 44 CFR part 72. The data required to support such requests are the same as those required for final revisions under Sections. 65.5, 65.6, and 65.7, except as-built certification is not required. All such requests shall be submitted to the FEMA Headquarters Office in Washington, DC, and shall be accompanied by the appropriate payment, in accordance with 44 CFR part 72.

Certification  
Requirements

Submission procedures

CLOMR

**Sec. 65.9 Review and response by the Administrator.**

If any questions or problems arise during review, FEMA will consult the Chief Executive Officer of the community (CEO), the community official designated by the CEO, and/or the requester for resolution. Upon receipt of a revision request, the Administrator shall mail an acknowledgment of receipt of such request to the CEO. Within 90 days of receiving the request with all necessary information, the Administrator shall notify the CEO of one or more of the following:

- (a) The effective map(s) shall not be modified;
- (b) The base flood elevations on the effective FIRM shall be modified and new base flood elevations shall be established under the provisions of part 67 of this subchapter;
- (c) The changes requested are approved and the map(s) amended by Letter of Map Revision (LOMR);
- (d) The changes requested are approved and a revised map(s) will be printed and distributed;
- (e) The changes requested are not of such a significant nature as to warrant a reissuance or revision of the flood insurance study or maps and will be deferred until such time as a significant change occurs;
- (f) An additional 90 days is required to evaluate the scientific or technical data submitted; or
- (g) Additional data are required to support the revision request.
- (h) The required payment has not been submitted in accordance with 44 CFR part 72, no review will be conducted and no determination will be issued until payment is received.

# LEVEE PROVISIONS

65.10

## Sec. 65.10 Mapping of Areas Protected by Levee Systems

(a) *General.* For purposes of the NFIP, FEMA will only recognize in its flood hazard and risk mapping effort those levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with the level of protection sought through the comprehensive flood plain management criteria established by §60.3 of this subchapter. Accordingly, this section describes the types of information FEMA needs to recognize, on NFIP maps, that a levee system provides protection from the base flood. This information must be supplied to FEMA by the community or other party seeking recognition of such a levee system at the time a flood risk study or restudy is conducted, when a map revision under the provisions of part 65 of this subchapter is sought based on a levee system, and upon request by the Administrator during the review of previously recognized structures. The FEMA review will be for the sole purpose of establishing appropriate risk zone determinations for NFIP maps and shall not constitute a determination by FEMA as to how a structure or system will perform in a flood event.

(b) *Design criteria.* For levees to be recognized by FEMA, evidence that adequate design and operation and maintenance systems are in place to provide reasonable assurance that protection from the base flood exists must be provided. The following requirements must be met:

### (1) *Freeboard.*

(i) Riverine levees must provide a minimum freeboard of three feet above the water-surface level of the base flood. An additional one foot above the minimum is required within 100 feet in either side of structures (such as bridges) riverward of the levee or wherever the flow is constricted. An additional one-half foot above the minimum at the upstream end of the levee, tapering to not less than the minimum at the downstream end of the levee, is also required.

(ii) Occasionally, exceptions to the minimum riverine freeboard requirement described in paragraph (b)(1)(i) of this section, may be approved. Appropriate engineering analyses demonstrating adequate protection with a lesser freeboard must be submitted to support a request for such an exception. The material presented must evaluate the uncertainty in the estimated base flood elevation profile and include, but not necessarily be limited to an assessment of statistical confidence limits of the 100-year discharge; changes in stage-discharge relationships; and the sources, potential, and magnitude of debris, sediment, and ice accumulation. It must be also shown that the levee will remain structurally stable during the base flood when such additional loading considerations are imposed. Under no circumstances will freeboard of less than two feet be accepted.

## MAPPING OF LEVEE SYSTEMS

For a levee system to be recognized on a FIRM, the following apply:

- Must provide protection against the base flood
- Must meet, and continue to meet, the following minimum standards:
  - Design
  - Operation
  - Maintenance

### Freeboard

- Riverine levees must provide protection to 3 ft above BFE
- An additional foot (BFE + 4) of protection is required within 100 ft of bridges and other structures and at the upstream end

### Exceptions

# LEVEE PROVISIONS

65.10

<p>(iii) For coastal levees, the freeboard must be established at one foot above the height of the one percent wave or the maximum wave runup (whichever is greater) associated with the 100-year stillwater surge elevation at the site.</p>	Coastal Levees
<p>(iv) Occasionally, exceptions to the minimum coastal levee freeboard requirement described in paragraph (b)(1)(iii) of this section, may be approved. Appropriate engineering analyses demonstrating adequate protection with a lesser freeboard must be submitted to support a request for such an exception. The material presented must evaluate the uncertainty in the estimated base flood loading conditions. Particular emphasis must be placed on the effects of wave attack and overtopping on the stability of the levee. Under no circumstances, however, will a freeboard of less than two feet above the 100-year stillwater surge elevation be accepted.</p>	Coastal Exceptions
<p>(2) <i>Closures.</i> All openings must be provided with closure devices that are structural parts of the system during operation and design according to sound engineering practice.</p>	Closure Requirements
<p>(3) <i>Embankment protection.</i> Engineering analyses must be submitted that demonstrate that no appreciable erosion of the levee embankment can be expected during the base flood, as a result of either currents or waves, and that anticipated erosion will not result in failure of the levee embankment or foundation directly or indirectly through reduction of the seepage path and subsequent instability. The factors to be addressed in such analyses include, but are not limited to: Expected flow velocities (especially in constricted areas); expected wind and wave action; ice loading; impact of debris; slope protection techniques; duration of flooding at various stages and velocities; embankment and foundation materials; levee alignment, bends, and transitions; and levee side slopes.</p>	Erosion Protection
<p>(4) <i>Embankment and foundation stability.</i> Engineering analyses that evaluate levee embankment stability must be submitted. The analyses provided shall evaluate expected seepage during loading conditions associated with the base flood and shall demonstrate that seepage into or through the levee foundation and embankment will not jeopardize embankment or foundation stability. An alternative analysis demonstrating that the levee is designed and constructed for stability against loading conditions for Case IV as defined in the U.S. Army Corps of Engineers (COE) manual, "Design and Construction of Levees" (EM 1110-2-1913, Chapter 6, Section II), may be used. The factors that shall be addressed in the analyses include: Depth of flooding, duration of flooding, embankment geometry and length of seepage path at critical locations, embankment and foundation materials, embankment compaction, penetrations, other design factors affecting seepage (such as drainage layers), and other design factors affecting embankment and</p>	Stability Analysis



## LEVEE PROVISIONS

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foundation stability (such as berms).

(5) *Settlement.* Engineering analyses must be submitted that assess the potential and magnitude of future losses of freeboard as a result of levee settlement and demonstrate that freeboard will be maintained within the minimum standards set forth in paragraph (b)(1) of this section. This analysis must address embankment loads, compressibility of embankment soils, compressibility of foundation soils, age of the levee system, and construction compaction methods. In addition, detailed settlement analysis using procedures such as those described in the COE manual, "Soil Mechanics Design—Settlement Analysis" (EM 1100-2-1904) must be submitted.

(6) *Interior drainage.* An analysis must be submitted that identifies the source(s) of such flooding, the extent of the flooded area, and, if the average depth is greater than one foot, the water-surface elevation(s) of the base flood. This analysis must be based on the joint probability of interior and exterior flooding and the capacity of facilities (such as drainage lines and pumps) for evacuating interior floodwaters.

(7) *Other design criteria.* In unique situations, such as those where the levee system has relatively high vulnerability, FEMA may require that other design criteria and analyses be submitted to show that the levees provide adequate protection. In such situations, sound engineering practice will be the standard on which FEMA will base its determinations. FEMA will also provide the rationale for requiring this additional information.

(c) *Operation plans and criteria.* For a levee system to be recognized, the operational criteria must be as described below. All closure devices or mechanical systems for internal drainage, whether manual or automatic, must be operated in accordance with an officially adopted operation manual, a copy of which must be provided to FEMA by the operator when levee or drainage system recognition is being sought or when the manual for a previously recognized system is revised in any manner. All operations must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP.

(1) *Closures.* Operation plans for closures must include the following:

(i) Documentation of the flood warning system, under the jurisdiction of Federal, State, or community officials, that will be used to trigger emergency operation activities and demonstration that sufficient flood warning time exists for the completed operation of all closure structures, including necessary sealing, before floodwaters reach the base of the closure.

Settlement Protection

Interior Drainage  
Analysis

Operation Plans

All operations must be under the jurisdiction of a Federal or State agency or recognized entity – or an agency or community participating in the NFIP, i.e., no private levees

Closure Operations

Warning System and  
Time

# LEVEE PROVISIONS

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<p>(ii) A formal plan of operation including specific actions and assignments of responsibility by individual name or title.</p>	<p>Formal Plan</p>
<p>(iii) Provisions for periodic operation, at not less than one-year intervals, of the closure structure for testing and training purposes.</p>	<p>Closure Testing</p>
<p>(2) <i>Interior drainage systems.</i> Interior drainage systems associated with levee systems usually include storage areas, gravity outlets, pumping stations, or a combination thereof. These drainage systems will be recognized by FEMA on NFIP maps for flood protection purposes only if the following minimum criteria are included in the operation plan:</p>	<p>Interior Drainage Systems</p>
<p>(i) Documentation of the flood warning system, under the jurisdiction of Federal, State, or community officials, that will be used to trigger emergency operation activities and demonstration that sufficient flood warning time exists to permit activation of mechanized portions of the drainage system.</p>	
<p>(ii) A formal plan of operation including specific actions and assignments of responsibility by individual name or title.</p>	
<p>(iii) Provision for manual backup for the activation of automatic systems.</p>	<p>Backup Provisions</p>
<p>(iv) Provisions for periodic inspection of interior drainage systems and periodic operation of any mechanized portions for testing and training purposes. No more than one year shall elapse between either the inspections or the operations.</p>	<p>Periodic Inspection Requirements</p>
<p>(3) <i>Other operation plans and criteria.</i> Other operating plans and criteria may be required by FEMA to ensure that adequate protection is provided in specific situations. In such cases, sound emergency management practice will be the standard upon which FEMA determinations will be based.</p>	
<p>(d) <i>Maintenance plans and criteria.</i> For levee systems to be recognized as providing protection from the base flood, the maintenance criteria must be as described herein. Levee systems must be maintained in accordance with an officially adopted maintenance plan, and a copy of this plan must be provided to FEMA by the owner of the levee system when recognition is being sought or when the plan for a previously recognized system is revised in any manner. All maintenance activities must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP that must assume ultimate responsibility for maintenance. This plan must document the formal procedure that ensures that the stability, height, and overall integrity of the levee and its associated structures and systems are maintained. At a minimum, maintenance plans shall specify the maintenance activities to be</p>	<p>Maintenance Plans</p> <p>All maintenance must be under the jurisdiction of a Federal or State agency or recognized entity – or an agency or community participating in the NFIP; i.e. — no private levees</p>

## LEVEE PROVISIONS

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performed, the frequency of their performance, and the person by name or title responsible for their performance.

(e) *Certification requirements.* Data submitted to support that a given levee system complies with the structural requirements set forth in paragraphs (b)(1) through (7) of this section must be certified by a registered professional engineer. Also, certified as-built plans of the levee must be submitted. Certifications are subject to the definition given at §65.2 of this subchapter. In lieu of these structural requirements, a Federal agency with responsibility for levee design may certify that the levee has been adequately designed and constructed to provide protection against the base flood.

Certification  
Requirements

Federal Agency  
exception

## HOW TO ALLOW HIGHER BFEs

65.12

Sec. 65.12 Revision of flood insurance rate maps to reflect base flood elevations caused by proposed encroachments.

(a) When a community proposes to permit encroachments upon the flood plain when a regulatory floodway has not been adopted or to permit encroachments upon an adopted regulatory floodway which will cause base flood elevation increases in excess of those permitted under paragraphs (c)(10) or (d)(3) of Sec. 60.3 of this subchapter, the community shall apply to the Administrator for conditional approval of such action prior to permitting the encroachments to occur and shall submit the following as part of its application:

(1) A request for conditional approval of map change and the appropriate initial fee as specified by Sec. 72.3 of this subchapter or a request for exemption from fees as specified by Sec. 72.5 of this subchapter, whichever is appropriate;

(2) An evaluation of alternatives which would not result in a base flood elevation increase above that permitted under paragraphs (c)(10) or (d)(3) of Sec. 60.3 of this subchapter demonstrating why these alternatives are not feasible;

(3) Documentation of individual legal notice to all impacted property owners within and outside of the community, explaining the impact of the proposed action on their property.

(4) Concurrence of the Chief Executive Officer of any other communities impacted by the proposed actions;

(5) Certification that no structures are located in areas which would be impacted by the increased base flood elevation;

(6) A request for revision of base flood elevation determination according to the provisions of Sec. 65.6 of this part;

(7) A request for floodway revision in accordance with the provisions of Sec. 65.7 of this part;

(b) Upon receipt of the Administrator's conditional approval of map change and prior to approving the proposed encroachments, a community shall provide evidence to the Administrator of the adoption of flood plain management ordinances incorporating the increased base flood elevations and/or revised floodway reflecting the post-project condition.

(c) Upon completion of the proposed encroachments, a community shall provide as-built certifications in accordance with the provisions of Sec. 65.3 of this part. The Administrator will initiate a final map revision upon receipt of such certifications in accordance with part 67 of this subchapter

Map Revisions when proposed encroachments elevate BFEs more than allowed

This section should normally be used when BFEs will exceed those allowed in (c)(10) and (d)(3) of 60.3

All 7 steps must be accomplished as appropriate to fully meet the intent of 65.12

See Endnote #5

Individual Legal Notice Requirement

Any impact:

- BFEs increase
- Contour changes
- Size of SFHA

Important Note: the provisions of 65.12 must be accomplished *before* the proposed development is permitted and is allowed to begin

## 70.1 Purpose of part. Procedure for Map Correction

The purpose of this part is to provide an administrative procedure whereby the Administrator will review the scientific or technical submissions of an owner or lessee of property who believes his property has been inadvertently included in designated A, AO, A1-30, AE, AH, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V Zones, as a result of the transposition of the curvilinear line to either street or to other readily identifiable features. The necessity for this part is due in part to the technical difficulty of accurately delineating the curvilinear line on either an FHBM or FIRM. These procedures shall not apply when there has been any alteration of topography since the effective date of the first NFIP map (i.e., FHBM or FIRM) showing the property within an area of special flood hazard. Appeals in such circumstances are subject to the provisions of part 65 of this subchapter.

PROCEDURE FOR  
MAP CORRECTION

## 70.2 Definitions.

The definitions set forth in part 59 of this subchapter are applicable to this part.

## 70.3 Right to submit technical information.

(a) Any owner or lessee of property (applicant) who believes his property has been inadvertently included in a designated A, AO, A1-30, AE, AH, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V Zones on a FHBM or a FIRM, may submit scientific or technical information to the Administrator for the Administrator's review.

Letter of Map  
Amendment (LOMA)  
procedures

(b) Scientific and technical information for the purpose of this part may include, but is not limited to the following:

Documentation required  
for LOMA submission

(1) An actual copy of the recorded plat map bearing the seal of the appropriate recordation official (e.g. County Clerk, or Recorder of Deeds) indicating the official recordation and proper citation (Deed or Plat Book Volume and Page Numbers), or an equivalent identification where annotation of the deed or plat book is not the practice.

(2) A topographical map showing (i) ground elevation contours in relation to the National Geodetic Vertical Datum (NVGD) of 1929, (ii) the total area of the property in question, (iii) the location of the structure or structures located on the property in question, (iv) the elevation of the lowest adjacent grade to a structure or structures and (v) an indication of the curvilinear line which represents the area subject to inundation by a base flood. The curvilinear line should be based upon information provided by any appropriate authoritative source, such as a Federal

Agency, the appropriate state agency (e.g. Department of Water Resources), a County Water Control District, a County or City Engineer, a Federal Emergency Management Agency Flood Insurance Study, or a determination by a Registered Professional Engineer;

(3) A copy of the FHBM or FIRM indicating the location of the property in question;

(4) A certification by a Registered Professional Engineer or Licensed Land Surveyor that the lowest grade adjacent to the structure is above the base flood elevation.

**70.4 Review by the Director.**

The Director, after reviewing the scientific or technical information submitted under the provisions of §70.3, shall notify the applicant in writing of his/her determination within 60 days after we receive the applicant's scientific or technical information that we have compared either the ground elevations of an entire legally defined parcel of land or the elevation of the lowest adjacent grade to a structure with the elevation of the base flood and that:

(a) The property is within a designated A, A0, A1-30, AE, AH, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, V0, V1-30, VE, or V Zone, and will state the basis of such determination; or

(b) The property should not be within a designated A, A0, A1-30, AE, AH, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, V0, V1-30, VE, or V Zone and that we will modify the FHBM or FIRM accordingly; or

(c) The property is not within a designated A, A0, A1-30, AE, AH, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, V0, V1-30, VE, or V Zone as shown on the FHBM or FIRM and no modification of the FHBM or FIRM is necessary; or

(d) We need an additional 60 days to make a determination.

**70.5 Letter of Map Amendment.**

Upon determining from available scientific or technical information that a FHBM or a FIRM requires modification under the provisions of §70.4(b), the Administrator shall issue a Letter of Map Amendment which shall state:

(a) The name of the Community to which the map to be amended was issued;

LOMA contents

## LOMA PROVISIONS

70.1-70.9

<p>(b) The number of the map;</p> <p>(c) The identification of the property to be excluded from a designated A, AO, A1-30, AE, AH, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, or V Zone.</p> <p>70.6 Distribution of Letter of Map Amendment.</p> <p>(a) A copy of the Letter of Map Amendment shall be sent to the applicant who submitted scientific or technical data to the Administrator.</p> <p>(b) A copy of the Letter of Map Amendment shall be sent to the local map repository with instructions that it be attached to the map which the Letter of Map Amendment is amending.</p> <p>(c) A copy of the Letter of Map Amendment shall be sent to the map repository in the state with instructions that it be attached to the map which it is amending.</p> <p>(d) A copy of the Letter of Map Amendment will be sent to any community or governmental unit that requests such Letter of Map Amendment.</p> <p>(e) [Reserved]</p> <p>(f) A copy of the Letter of Map Amendment will be maintained by the Agency in its community case file.</p> <p>70.7 Notice of Letter of Map Amendment.</p> <p>(a) The Administrator, shall not publish a notice in the Federal Register that the FIRM for a particular community has been amended by letter determination pursuant to this part unless such amendment includes alteration or change of base flood elevations established pursuant to part 67. Where no change of base flood elevations has occurred, the Letter of Map Amendment provided under §§70.5 and 70.6 serves to inform the parties affected.</p> <p>(b) [Reserved]</p> <p>70.8 Premium refund after Letter of Map Amendment.</p> <p>A Standard Flood Insurance Policyholder whose property has become the subject of a Letter of Map Amendment under this part may cancel the policy within the current policy year and receive a premium refund under the conditions set forth in §62.5 of this subchapter.</p>	<p>LOMA distribution:</p> <ul style="list-style-type: none"><li>• Submitter</li><li>• Local map repository</li><li>• State map repository</li><li>• Any community or government unit that requests a copy of the LOMA</li><li>• FEMA community case file (usually the Regional Office)</li></ul> <p>Premium refund following issuance of a LOMA</p>
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<p>70.9 Review of proposed projects.</p> <p>An individual who proposes to build one or more structures on a portion of property that may be included inadvertently in a Special Flood Hazard Area (SFHA) may request FEMA's comments on whether the proposed structure(s), if built as proposed, will be in the SFHA. FEMA's comments will be issued in the form of a letter, termed a Conditional Letter of Map Amendment. The data required to support such requests are the same as those required for final Letters of Map Amendment in accordance with §70.3, except as-built certification is not required and the requests shall be accompanied by the appropriate payment, in accordance with 44 CFR part 72. All such requests for CLOMAs shall be submitted to the FEMA Regional Office servicing the community's geographic area or to the FEMA Headquarters Office in Washington, DC.</p>	CLOMA
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## 73.1 Purpose of part.

This part implements section 1316 of the National Flood Insurance Act of 1968.

## 73.2 Definitions.

(a) Except as otherwise provided in this part, the definitions set forth in part 59 of this subchapter are applicable to this part.

(b) For the purpose of this part a duly constituted State or local zoning authority or other authorized public body means an official or body authorized under State or local law to declare a structure to be in violation of a law, regulation or ordinance.

(c) For the purpose of this part, State or local laws, regulations or ordinances intended to discourage or restrict development or occupancy of flood-prone areas are measures such as those defined as Flood plain management regulations in §59.1 of this subchapter. Such measures are referred to in this part as State or local flood plain management regulations.

## 73.3 Denial of flood insurance coverage.

(a) No new flood insurance shall be provided for any property which the Administrator finds has been declared by a duly constituted State or local zoning authority or other authorized public body, to be in violation of State or local laws, regulations or ordinances which are intended to discourage or otherwise restrict land development or occupancy in flood-prone areas.

(b) New and renewal flood insurance shall be denied to a structure upon a finding by the Administrator of a valid declaration of a violation.

(c) States and communities shall determine whether to submit a declaration to the Administrator for the denial of insurance.

(d) A valid declaration shall consist of:

(1) The name(s) of the property owner(s) and address or legal description of the property sufficient to confirm its identity and location;

(2) A clear and unequivocal declaration that the property is in violation of a cited State or local law, regulation or ordinance;

(3) A clear statement that the public body making the declaration has authority to do so and a citation to that authority;

DENIAL OF FLOOD  
INSURANCE OR  
"1316" ACTION

What constitutes a valid  
1316 Declaration?

- Specific identification of the property and owner
- Declaration of violation and citation of the law broken
- Describe the public body and its authority to declare the 1316 action
- Documentation of notification and intent
- Actions are pursuant to the Act

<p>(4) Evidence that the property owner has been provided notice of the violation and the prospective denial of insurance; and</p> <p>(5) A clear statement that the declaration is being submitted pursuant to section 1316 of the National Flood Insurance Act of 1968, as amended.</p> <p>73.4 Restoration of flood insurance coverage.</p> <p>(a) Insurance availability shall be restored to a property upon a finding by the Administrator of a valid rescission of a declaration of a violation.</p> <p>(b) A valid rescission shall be submitted to the Administrator and shall consist of:</p> <p>(1) The name of the property owner(s) and an address or legal description of the property sufficient to identify the property and to enable FEMA to identify the previous declaration;</p> <p>(2) A clear and unequivocal statement by an authorized public body rescinding the declaration and giving the reason(s) for the rescission;</p> <p>(3) A description of and supporting documentation for the measures taken in lieu of denial of insurance in order to bring the structure into compliance with the local flood plain management regulations; and</p> <p>(4) A clear statement that the public body rescinding the declaration has the authority to do so and a citation to that authority.</p>	<p>Restoration of Flood Insurance availability</p>
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## ENDNOTES

1. The term “floodplain” is commonly used in ways that do not necessarily reflect the regulatory definition in Section 59.1 which states, “Flood plain or flood prone area means any land area susceptible to being inundated by water from any source . . . “ Apart from the official definition, the term “floodplain” is also commonly used to represent regulatory flood zones, or regulatory floodplains. It is often used in verbal discussions and even in training environments. It is important for the speaker or instructor to specifically identify the intended meaning if used in a context that deviates from its official definition.
2. There has been confusion as to the interpretation of these 2 paragraphs , 44 CFR 60.3(b)(3) and (4). The following policy guidance is based on these references:
  - 44 CFR 60.3(a)(3)
  - 44 CFR 60.3(b)(3) and (4)
  - “Managing Floodplain Development in Approximate A Zone Areas”, FEMA 265, July 1995

Paragraph “(b)” of 44 CFR 60.3 provides regulatory provisions for the development of Base Flood Elevations (BFEs) in Approximate A Zones. These are zones that have floodplain contour delineations but have never been studied by detailed engineering methods. There are no BFEs or any other more descriptive information.

BFEs are the primary measurement for determining flood risk. Floodplain regulations, national and local, usually require that a structure must be elevated to a certain level above the BFE to be considered compliant. This is also the method used to determine flood insurance policy premium rates.

With no BFEs, only the outer contours of the regulatory floodplain are delineated. These are only approximations that are roughly based on topography and rainfall history. The true flood risk remains largely unknown. Accurate determinations of flood risk can only be obtained through a hydrologic and hydraulic engineering study. The National Flood Insurance Program regulations require builders or developers to develop BFEs when none exist in certain situations. This is especially important when structures are involved.

The provisions of 44 CFR 60.3(b)(3) and (4) state:

*(3) Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than 50 lots or 5 acres, whichever is the lesser, include within such proposals base flood elevation data;*

*(4) Obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, including data developed pursuant to paragraph (b)(3) of this section, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the*

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*community's FHBM or FIRM meet the standards in paragraphs (c)(2), (c)(3), (c)(5), (c)(6), (c)(12), (c)(14), (d)(2) and (d)(3) of this section;*

Paragraph (b)(3) establishes a threshold that, if exceeded, would require the development of BFEs. The question arises as to the definition of "... base flood elevation data." Many have asserted that less costly, simplified methods of determining BFEs would be appropriate because of the word "data". However, this is not the case. The intent of this provision is that if development (not just a subdivision) occurs within an area of 5 acres or more, or is subdivided into 50 lots or more, detailed BFEs must be developed where structures will be constructed. It should be noted that not all of the 5 acres or 50 lots must be in the regulatory floodplain for this provision to be required. If any portion of the development is in the floodplain, then detailed BFEs are required for the structures' location.

The justification for requiring detailed BFEs comes from the document "Managing Floodplain Development in Approximate Zone A areas", FEMA 265, dated July 1995.

*For developments that exceed the thresholds identified in NFIP regulations Subparagraph 60.3(b)(3), BFEs must be either obtained from other sources or developed using detailed methodologies comparable to those contained in a Flood Insurance Study*

*FEMA 265, Page III-5*

If the development falls below the 5 acre/50 lot threshold, and structures will be part of the development, then simplified methods described in FEMA 265 may be used to determine BFEs. However, it is important to remember that this is a minimum standard. Communities are encouraged to require the use of detailed methods for development proposals that fall below the threshold.

Paragraph (b)(4) requires that the community make an earnest effort to "... obtain, review, and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source, including data developed pursuant to paragraph (b)(3)."

The BFE data referred to here must also be developed by detailed methods. In other words, if detailed BFE data exist, they must be used. It is important for the community to actively look for the information, record it, and use it. Sources for detailed BFE data can include, but are certainly not limited to:

- Federal: USDA/NRCS, DoT, USGS, USACE, FHWA
- State: State Dept of Transportation, Natural Resources
- Private: railroads, engineering firms, developers, construction firms

The data from the above sources should be used as long as they reasonably reflect flooding conditions expected during the Base Flood (100-year flood) event, are not

## ENDNOTES

known to be scientifically or technically incorrect, and represent the best data available.

If such data do not exist, it becomes the responsibility of the community to determine whether simplified methods may be used or if detailed BFEs are more appropriate. Though detailed BFEs are more expensive than a simplified method, development of BFEs using detailed methods represent the most accurate way of determining flood risk. The extra cost could be overcome by lower flood insurance rates plus the time and expense it requires to repair a flood damaged home.

If the size of the new subdivision or other development is less than the threshold in paragraph (b)(3) and no BFE data are available from another source as defined in paragraph (b)(4), paragraph 60.3(a)(3) mandates that the community shall, "... determine whether proposed building sites will be reasonably safe from flooding", and "... be constructed by methods and practices that minimize flood damages ...". This means that the community should do what it can to protect development, especially structures, from the effects of flooding.

Detailed BFEs are required to support any type of Letter of Map change (LOMC). Detailed BFEs are also required for flood insurance premium determinations on post FIRM structures. Although it is possible to obtain flood insurance on a structure located in an Approximate A Zone, an elevation certificate reflecting detailed BFEs could result in a lower premium.

3. When introducing earthen fill to remove a structure from the SFHA, it is important that the community ensures that the provisions of 65.5 and Technical Bulletin #10 are followed. Both must be referenced to gain a complete awareness of what is expected to be fully compliant. Some of the activities that can potentially be overlooked include:
  - a. The term "engineered earthen fill" as found in 65.5 refers to the activities that must be accomplished to use fill in the SFHA to elevate a structure. Those requirements are described in detail in Technical Bulletin #10 and include compaction standards, types of soils that may be used, etc.
  - b. Although the term "reasonably safe from flooding" has been in the regulation (60.3(a)(3)) since the earliest days of the NFIP, it has only been recently that its current emphasis appeared and additional certification required. The definition for "reasonably safe from flooding" is found in Section 65.2(c).
  - c. We now must consider the risks of *subsurface water* when using fill to elevate a structure in the SFHA and preparing a LOMR-F.

It is important that both 65.5 and Technical Bulletin #10 be reviewed and the provisions followed anytime earthen fill is introduced in the SFHA and a LOMR-F is required.

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4. Referencing 65.6 and 65.7 the revision of BFEs and floodways

Revisions of BFEs and floodways must be reported to FEMA by meeting the requirements of these 2 sections. The result is a Letter of Map Revision (LOMR). According to Section 65.8, a completed LOMR should be returned to the requester within 90 days after all required study information and materials have been received by FEMA.

However, the average turnaround time for a completed LOMR is over 200 days. The reason for this delay is most often due to one or a combination of the following factors:

- a. Using incorrect or outdated submission forms
- b. All required data and information were not submitted
- c. Forms were not completed as required
- d. Fees were not paid
- e. Incorrect or inaccurate modeling was used
- f. Did not get community concurrence
- g. Did not provide property owner notifications if required
- h. Lack of communication between the community or other requester and the engineer doing the study and submission work.
- i. In general, the requester often fails to follow the instructions on the MT-2 form

It is important to submit complete LOMR applications. Even if this is done initially, the reviewing official may still need to ask for more information if the situation dictates. The timely receipt of the final LOMR depends primarily on the submission of a complete application containing accurate information and good communications between all of the parties involved.

5. Section 65.12 of the Regulation is intended to be used when the BFE requirements of 60.3 (c)(10) or (d)(3) are exceeded. In order to allow the development to begin that caused the excessive rise in BFE, all seven steps of 65.12 must be accomplished when applicable. Unfortunately, it is sometimes common to discover a violation of (c)(10) or (d)(3) after the fact, often many years later. It is usually discovered during the process of submitting a LOMR when changes occurred within the stream being studied and were never reported to the community and FEMA. In this event, the community must accomplish all of the 65.12 steps that are possible to accomplish - retroactively.

## **COMMON REFERENCES**

### **Technical Bulletins**

Guide-01: Users Guide to Technical Bulletins

TB 1-93: Openings in Foundation Walls

TB 2-93: Flood-Resistant Materials

TB 3-93: Non-Residential Floodproofing – Requirements and Certification (“Dry” Floodproofing)

TB 4-93: Elevator Installation

TB 5-93: Free-of-Obstruction Requirements (Coastal requirements)

TB 6-93: Below-grade Parking Requirements

TB 7-93: Wet Floodproofing Requirements

TB 8-96: Corrosion Protection for Metal Connectors in Coastal Areas

TB 9-99: Design and Construction Guidance for Breakaway Walls Below Elevated Buildings

TB 10-01: Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas are Reasonably Safe From Flooding

TB 11-01: Crawlspace Construction for Buildings Located in Special Flood Hazard Areas

### **Other Publications**

FEMA 55 - “Coastal Construction Manual” – 3 Volumes

FEMA – 85 “Manufactured Home Installation in Flood Hazard Areas”

FEMA - 102 “Floodproofing Non-Residential Structures”

FEMA – 213 “Answers to Questions About Substantially Damaged Buildings”

FEMA - 265 “Managing Floodplain Development in Approximate A Zone Areas”

FEMA - 312 “Homeowner’s Guide to Retrofitting”

FEMA – 480 “Floodplain Management Requirements – a Guide and Desk Reference . . .”

FMB – 1 “Use of Flood Insurance Study (FIS) Data”

NFIP – 25 “How the NFIP Works”

NFIP 40-001-02 “Myths and Facts about the NFIP”

**All of the publications noted above can be ordered from FEMA’s Publication Office by calling (800) 480-2520.**

